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United States
Department of
Agriculture

Forest Service

Pacific
Northwest
Region

1986

# Proposed Land and Resource Management Plan

## Okanogan National Forest

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# PREAMBLE

This Proposed Forest Plan has been prepared according to Secretary of Agriculture regulations (36 CFR 219) which are based on the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act of 1976 (NFMA). The plan has also been developed in accordance with regulations (40 CFR 1500) for implementing the National Environmental Policy Act of 1969 (NEPA). Because this plan is considered a major Federal action significantly affecting the quality of the human environment, a detailed statement (environmental impact statement) has been prepared as required by NEPA. The Forest Plan represents the implementation of the preferred alternative as identified in the Draft Environmental Impact Statement (DEIS) for the Forest Plan.

If any particular provision of this proposed action, or the application thereof to any person or circumstances, is held invalid, the remainder of the proposed action and the application of such provision to other persons or circumstances shall not be affected thereby.

Additional information about this plan is available from:

Forest Supervisor
Okanogan National Forest
P.O. Box 950
1240 Second Avenue South
Okanogan, Washington 98840

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## TABLE OF CONTENTS

PAGE

PREAMBLE ........ i

TABLE OF CONTENTS ........ i

CHAPTER 1 - FOREST PLAN INTRODUCTION ........ 1-1

- Purpose of the Forest Plan ........ 1-1
- Relationship of the Forest Plan to Other Documents ........ 1-1
- Plan Structure ........ 1-3
- Forest Description ........ 1-4

CHAPTER 2 - SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION ........ 2-1

- Resource Supply Conditions ........ 2-1
  - Development of Minimum Management Requirements ........ 2-1
  - Supply Benchmarks ........ 2-3
- Resource Demand Projections ........ 2-6
  - Timber ........ 2-8
  - Range ........ 2-8
  - Roadless Areas ........ 2-8
  - Old Growth Habitat ........ 2-8
  - Deer ........ 2-9
  - Roaded Recreation and Visual Resource ........ 2-9
  - Present Net Value ........ 2-9
- Information Needs ........ 2-10

CHAPTER 3 - RESPONSE TO ISSUES, CONCERNS AND OPPORTUNITIES ........ 3-1

- Soil, Water and Air ........ 3-1
- Mineral Development ........ 3-2
- Fire ........ 3-2
- Roads and Access ........ 3-3
- Wilderness ........ 3-5
- Roadless Areas ........ 3-6
- Timber Management ........ 3-7
- Range Management ........ 3-11
- Threatened, Endangered and Sensitive Species ........ 3-11
- Research Natural Areas ........ 3-12
- Wildlife and Fish ........ 3-12
- Economics ........ 3-14
- Social ........ 3-15
- Recreation ........ 3-16
- Scenery ........ 3-18
- Wild, Scenic and Recreation Rivers ........ 3-20
- Cultural Resources ........ 3-20
- Multiple Use ........ 3-21
- RPA ........ 3-21

PAGE

CHAPTER 4 - FOREST MANAGEMENT DIRECTION........................ 4-1

Forest Management Goals and Desired Future Conditions............ 4-1
Forest Management Objectives..................................... 4-3
   Resource Summaries (Programs)................................. 4-4
      Timber Management Program.................................. 4-4
      Watershed Program.......................................... 4-13
      Lands Program.............................................. 4-14
      Minerals Program........................................... 4-15
      Wilderness Program......................................... 4-15
      Recreation Program......................................... 4-16
      Wildlife Program........................................... 4-18
      Fire Protection and Use Program............................ 4-19
      Air Quality Program........................................ 4-20
      Range Management Program................................... 4-20
      Facilities Program......................................... 4-21
   Objectives.................................................... 4-21
Forestwide Standards and Guidelines.............................. 4-29
Management Prescriptions......................................... 4-53

CHAPTER 5 - IMPLEMENTATION....................................... 5-1

Introduction..................................................... 5-1
Implementation Direction......................................... 5-1
   Project Scheduling............................................ 5-1
   Consistency With Other Instruments............................ 5-1
   Budget Proposals.............................................. 5-3
   Environmental Analysis........................................ 5-3
   Monitoring and Evaluation Program............................. 5-4
Amendment and Revision........................................... 5-26

APPENDICES

A - RECREATION PROJECTS......................................... A-1

B - WILDERNESS PROJECTS......................................... B-1

C - WILDLIFE PROJECT SCHEDULE................................... C-1

D - RANGE MANAGEMENT PROJECT SCHEDULE........................... D-1

E - DETAILED SCHEDULE OF TIMBER SALES - FY 1987 TO FY 1989....... E-1

F - WATERSHED RESTORATION SCHEDULE.............................. F-1

G - MAJOR ACTIVITIES PLANNED FOR ROADS.......................... G-1

## Chapter 1

# FOREST PLAN INTRODUCTION

## PURPOSE OF THE FOREST PLAN

The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Okanogan National Forest and those portions of the Wenatchee and Mt. Baker-Snoqualmie National Forests that are administered by the Okanogan National Forest Supervisor. The Plan describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. It will be revised on a 10-year cycle, or at least every 15 years.

The Forest Plan embodies the provisions of the National Forest Management Act, the implementing regulations, the Pacific Northwest Regional Guide, and other guiding documents. Land use determinations, prescriptions, and standards and guidelines are a statement of the Plan's management direction. The projected outputs, services, and rates of implementation are estimates and are dependent on the annual budgeting process.

## RELATIONSHIP OF THE FOREST PLAN TO OTHER DOCUMENTS

This Forest Plan sets forth the proposed action for managing the resources of the Okanogan National Forest. The Plan results from extensive analysis and considerations that are addressed in the accompanying environmental impact statement (EIS). The planning process and the analysis procedures used to develop this Plan are described or referenced in the EIS. The EIS also describes other alternatives considered in the planning process. Activities and projects will be planned and implemented to carry out the direction in this Plan. The forest will perform environmental analysis on these projects and activities. Project level environmental analysis will use the data and evaluations in the Plan and EIS as its basis and will supplement this EIS with more specific data and evaluation. Documentation of project level analysis will be tiered to the EIS and Record of Decision accompanying this Forest Plan.

The Regional Guide provides direction for this National Forest and develops standards and guidelines addressing major issues and management concerns considered at the Regional level to facilitate Forest Planning.

The Okanogan National Forest EIS is tiered to the 1981 "Methods of Managing Competing Vegetation" FEIS. The decision made in the 1981 FEIS is to use a variety of techniques, including the use of herbicides. It also directs the forests to make site by site environmental analyses.

The Forest Plan serves as the single land management plan for the Okanogan National Forest. The Forest Plan supercedes most previous land management and resource management plans prepared for the Okanogan National Forest. The following is a list of land management and resource management plans superceded by this Land and Resource Management Plan:

1. The 1969 Okanogan National Forest Timber Management Plan
2. The 1969 Winthrop Ranger District Multiple-Use Plan
3. The 1969 Conconully Ranger District Multiple-Use Plan
4. The 1969 Twisp Ranger District Multiple-Use Plan
5. The 1969 Okanogan National Forest Land Ownership Adjustment Plan
6. The 1970 Golden Horn Multiple-Use Survey Report
7. The 1970 Harts Pass Multiple-Use Survey Report
8. The 1970 Liberty Bell Multiple-Use Survey Report
9. The 1970 Sawtooth Multiple-Use Survey Report
10. The 1975 Biological Unit Plan for the Methow Deer Herds
11. The 1978 Visual Resource Management Plan
12. The 1978 Okanogan National Forest Off-Road Vehicle Plan
13. The 1979 Tonasket Planning Unit Land Management Plan
14. The 1979 Pasayten Wilderness Management Plan
15. The 1980 Five-year Interim Road Management Plan
16. The 1983 Appropriate Suppression Response Implementation Plan

The 1984 Early Winters Alpine Winter Sports Study FEIS decision is incorporated by reference to this plan.

Upon implementation, Okanogan National Forest management activities will be brought into compliance with the Forest Plan. Appropriated budgets may alter the schedule of activities and outputs. In addition, all permits, contracts and other instruments for the use and occupancy of National Forest System lands and resource uses will be made consistent with the Forest Plan as per the statements in Chapter V of this Plan.

Resource management objectives are displayed in Chapter IV, and schedules of resource management activities for each management area are displayed in the appendices.

Several documents designed to give further guidance to management activities will be developed "under the umbrella of" this Forest Plan.

Examples of such documents are:

Forest Travel Plan
Allotment Management Plans
Area Transportation Analysis
Fire Management Action Plans
Wilderness Implementation Schedules
O.R.V. Plans
Viewshed Corridor Plans
Early Winters Master Plan
Early Winters Phase 1 Site Development Plan

The management direction provided by this Forest Plan comprises the framework within which project planning and activities take place. It defines management area goals and management standards that guide project activities toward achieving a desired future condition for the management area and, collectively, for the forest. It specifies a schedule for project activities (management practices). It provides guidance concerning potential land and habitat limitations, including assumptions about the appropriate vegetation management practices for timber sale projects. On-the-ground project analysis verifies the appropriateness of those assumptions.

Within this guidance, projects are developed to most efficiently and effectively accomplish management goals and objectives. Requirements of the National Environmental Policy Act will be met by all projects.

Project environmental analyses provide an essential source of information for Forest Plan monitoring. First, as project analyses are completed, new or emerging public issues or management concerns may be identified. Second, the management direction designed to facilitate achievement of the management area goals are validated by project analyses. Third, the site specific data collected for project environmental analyses serve as a check on the correctness of the land allocation. All of the information included in the project environmental analyses is used in the monitoring process to determine when changes should be made in the Forest Plan.

## PLAN STRUCTURE

The plan is organized into five chapters. The interrelated purposes of Chapters 2-5 and the appendices that follow are introduced here.

Chapter 2 briefly summarizes the supply and demand conditions for significant market and nonmarket goods and services associated with the planning area. Special conditions affecting supply or demand are briefly described. The focus of the conditions is on those that relate to the ICOs discussed in Chapter 3. Future information needs are also cited.

Chapter 3 shows how the management plan addresses and responds to major public issues, management concerns and resource opportunities identified during the planning process. Where Chapter 2 stated the potential to resolve the ICOs, this chapter addresses how the proposed plan responds to the ICOs.

Chapter 4 presents the management goals, objectives, and standards and guidelines that constitute direction for resource management covered by the plan. The appendices supplement and explain the basis of the directiont found in chapter 4 but do not include direction.

Chapter 5 incorporates further direction in three sections under the headings of Implementation Direction, Monitoring and Evaluation Program, and Amendments and Revisions. Collectively, these sections explain how management direction will be implemented, how implementation activities will be monitored and evaluated, and how the plan can be kept current in light of changing conditions or other findings.

## FOREST DESCRIPTION

The Okanogan National Forest is one of the most scenic areas in Washington State. The rugged North Cascades mountain range forms the western boundary of the forest; jagged, glacier carved peaks provide a backdrop for sweeping vistas and panoramic views. The Okanogan Forest (including those portions of the Mt. Baker-Snoqualmie and Wenatchee National Forests administered by the Okanogan National Forest) is located in North Central Washington, occupying 1,706,200 acres in portions of Okanogan, Skagit, Whatcom and Chelan counties, with Okanogan County covering most of the forest.

Glaciation has played an important role in shaping the topography of the Okanogan National Forest. Terrain ranges from the steep and rugged ridges and valleys of the North Cascades which were sculpted by alpine glaciation, to the moderate and gentle topography of the Okanogan Highlands caused by continental glaciation. Two major river systems drain the forest; the Okanogan River and its tributaries are located on the eastern portion of the forest, and the Methow River and its tributaries drain the middle portion, on the east side of the Cascade Crest. Lands west of the Cascade Crest are drained by tributaries of the Skagit River.

The majority of the population of Okanogan County lives in the Okanogan and Methow River valleys. The major towns found in and near these valleys are Omak, Okanogan, Brewster, Pateros, Twisp, Winthrop, Tonasket and Oroville. The highest population densities occur in and around the towns of Omak and Okanogan. Farming, ranching, timber and recreation are the most important elements in the economy of the area. The principal forest resources are recreation, wildlife, timber and forage.

Administratively, the forest is divided into three ranger districts, Winthrop, Twisp and Tonasket. Two engineering zones, the Methow Valley and the Okanogan Valley, provide support services.

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# SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

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## Chapter 2

# SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

## RESOURCE SUPPLY CONDITIONS

This chapter summarizes the management situation at the time these plan decisions were made. It focuses on the supply and demand of the Okanogan National Forest's resources and on identified information needs. Its purpose is to give managers a sense of context about the decisions.

This section includes a summary display of the constrained maximum physical and biological production potentials for significant individual goods and services (maximum resource level benchmarks) identified in the Analysis of the Management Situation. Also included are displays of the production levels that are attainable under current management direction.

The supply benchmarks are:

1. Current direction (as defined in plans)
2. Timber
3. Present net value
4. Range forage
5. Roadless recreation
6. Roaded natural recreation
7. Wildlife habitat
8. Minimum level management

### A. Development of Minimum Management Requirements

As the process of developing benchmarks and alternatives was under way, National direction was developed to ensure that they complied with the mimimum requirements of applicable laws and regulations. Subsequently, the Pacific Northwest Region developed direction to ensure that the mimimum requirements were applied consistently across the Region. This direction was incorporated into a matrix and distributed under a letter dated February 9, 1983, Land and Resource Management Planning (1920). The letter and matrix are on file at the Regional Office, Pacific Northwest Region in Portland, Oregon, and at the Supervisor's Office, Okanogan National Forest in Okanogan, Washington. Since the document is lengthy and not totally pertinent to resource management on the forest, only its more significant points are summarized in the following section.

Regional direction provided guidelines for minimum management requirements (MMRs) pertaining to the management of the following resources:

1. Timber
2. Fish and Wildlife
3. Soil and Water Resources and Land Productivity
4. Water Quality
5. Riparian Areas
6. Range
7. Miscellaneous

Standards and guidelines combined with coordination protect most forest resources without impacting outputs or the production of goods and services on the forest. The MMRs for soil and land productivity, water quality and range can be met without developing special requirements or restrictions. While these are important resources on the forest, no serious problems are associated with them. Refer to Chapter III of the DEIS for more detailed discussions of individual resources.

Regional guidelines were used to provide for MMRs related to riparian, timber and wildlife resources. With regard to timber harvesting, the regulations require that created openings not exceed 40 acres in size, and that a logical harvest unit is left between cutting units. The NFMA regulations also require that leave units not be harvested until previously harvested units are no longer `openings.' Units are no longer considered to be openings when they are adequately stocked with trees 4.5 feet tall. Following harvest on the Okanogan National Forest, between 11 and 17 years are required to grow a tree from seed to 4.5 feet. This period is strongly related to elevation and to tree species. Low and mid-elevation stands of ponderosa pine, western larch and Douglas-fir attain 4.5 feet sooner than higher elevation stands of Douglas-fir or mid and high elevations stands of Engelmann spruce and subalpine fir.

Dispersion coefficients were calculated for each working group, including riparian areas, based upon assumed cutting practices, species composition and elevation. All of the lodgepole pine working group was assumed to be regenerated by clearcut. Mixed conifer working groups (productive wet and productive dry) were assumed to be regenerated by approximately equal proportions of clearcut (or seed tree) and shelterwood. Created opening dispersion constraints are not applied to shelterwoods until removal of the overwood. A formula was used to calculate the dispersion coefficients used in FORPLAN. This formula was obtained from Appendix 1, Regional Guidelines for Incorporating Minimum Management Requirements in Benchmarks and Alternatives, February 9, 1983, on file in the Supervisor's Office in Okanogan.

Regional Direction was followed to meet MMRs for wildlife habitat. MMRs were developed for the following species on the Okanogan National Forest: (1) the northern spotted owl, barred owl, pileated woodpecker, marten and northern 3-toed woodpecker as indicators for mature and old growth conifers, (2) primary cavity excavators (woodpeckers) for dead and defective trees, (3) the mule deer for winter range on the northeast portion of the forest, and (4) bald eagle and grizzly bear as threatened species (the peregrine falcon, an endangered species, is no longer listed for the Okanogan National Forest).

## B. Supply Benchmarks

The primary issues which guided the development of the Okanogan National Forest Plan revolved around the management of the recreation, timber, visual and wildlife resources. "Benchmarks" were developed in order to help define the decision space available to the forest within which alternatives could be formulated to address the identified planning issues. The benchmarks were designed to explore the maximum supply potentials for each resource that could be produced while satisfying all of the legal requirements for forest planning. The legal requirements included those pertaining to maximum size and dispersion of harvest units, and those related to the minimum habitat requirements for spotted owls, bald eagles, goshawks, pine martens, northern three-toed woodpeckers and primary cavity nesters.

The following table displays the outputs and effects associated with the various resource maximization benchmarks.

Table 2.1 also highlights the recreation, timber, visual and wildlife output levels for each of the resource maximization benchmarks. From this, an idea of the magnitude of complimentary and competitive relationships that exist between the production of these key resources can be obtained.

Current Direction is a compilation of direction from approved management plans; continuation of existing policies, standards and guidelines; current budget updated for changing costs over time; and, to the extent possible, production of current levels and mixes of resource outputs.

## TABLE 2.1

## SUMMARY OF PROJECTED SUPPLY OF KEY VARIABLES

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | | (Average Annual Units) | | |
| Deer Winter Range - Snow Intercept/Thermal Cover (%) | | | | | |
| Current Direction | 17 | 16 | 12 | 13 | 11 |
| Maximum Wildlife Benchmark | 18 | 18 | 18 | 18 | 18 |
| Proposed Plan | 16 | 16 | 16 | 17 | 17 |
| Old Growth/Mature Habitat - Forestwide (Thousand Acres) | | | | | |
| Current Direction | 187 | 187 | 187 | 187 | 177 |
| Maximum Wildlife Benchmark | 204 | 204 | 204 | 204 | 203 |
| Proposed Plan | 199 | 198 | 193 | 191 | 189 |
| Allowable Sale Quantity (Million CF) | | | | | |
| Current Direction | 14.3 | 12.6 | 12.0 | 10.2 | 10.2 |
| Maximum Timber Benchmark | 20.0 | 20.0 | 20.0 | 20.0 | 20.1 |
| Proposed Plan | 15.4 | 12.5 | 11.0 | 11.0 | 11.0 |
| Sediment (Tons/Year Index) | | | | | |
| Current Direction | 321 | 332 | 335 | 346 | 357 |
| Maximum Timber Benchmark | 454 | 415 | 411 | 403 | 431 |
| Proposed Plan | 326 | 328 | 334 | 344 | 351 |
| Payments to Counties (Million $) | | | | | |
| Current Direction | 1.1 | 1.0 | .9 | .8 | .8 |
| Maximum Timber Benchmark | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Proposed Plan | 1.2 | 1.0 | .8 | .8 | .8 |

## TABLE 2.1

## SUMMARY OF PROJECTED SUPPLY OF KEY VARIABLES

| OUTPUTS AND EFFECTS (Units of Measure) | ALL DECADES 1986-2030 |
|---|---|
| Unroaded Areas (Thousand Acres) | |
| Current Direction | 149 |
| Maximum Roadless Recreation Benchmark | 481 |
| Proposed Plan | 207 |
| Visual Quality Objectives (Thousand Acres) | |
| Retention VQO | |
| Current Direction | 298 |
| Maximum Roadless Recreation Benchmark | 619 |
| Proposed Plan | 329 |
| Partial Retention VQO | |
| Current Direction | 289 |
| Maximum Roaded Recreation Benchmark | 302 |
| Proposed Plan | 56 |
| Long-Term Sustained Yield (Million CF) | |
| Current Direction | 18.1 |
| Maximum Timber Benchmark | 23.2 |
| Proposed Plan | 20.0 |
| Lands Suitable for Timber Production (Thousand Acres) | |
| Current Direction | 652.7 |
| Maximum Timber Benchmark | 703.2 |
| Proposed Plan | 568.4 |
| Present Net Value (Million $) | |
| Current Direction | 317.1 |
| Maximum PNV Benchmark | 355.5 1/ |
| Proposed Plan | 287.6 |

1/ The Maximum Roaded Recreation Benchmark does not include road costs because a benchmark is not mapped.

## RESOURCE DEMAND PROJECTIONS

This section is a summary of projected demands for the significant variables addressed in the Analysis of the Management Situation. Both supply and demands conditions are displayed for each RPA planning period.

TABLE 2.2: SUMMARY OF PROJECTED SUPPLY AND ANTICIPATED DEMAND

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | (Average Annual Units) | | | |
| Developed Recreation Use (1000 RVDs) | | | | | |
| Current Direction | 622 | 876 | 925 | 980 | 1042 |
| Maximum Roaded Recreation Benchmark | 622 | 876 | 925 | 980 | 1042 |
| Anticipated Demand | 641 | 855 | 934 | 1000 | 1054 |
| Non-Wilderness Dispersed Recreation Use (1000 RVDs) (Includes WFUDS) | | | | | |
| Roaded | | | | | |
| Current Direction | 420 | 512 | 572 | 679 | 758 |
| Maximum Timber Benchmark | 405 | 521 | 582 | 674 | 769 |
| Anticipated Demand | 447 | 496 | 550 | 580 | 630 |
| Unroaded | | | | | |
| Current Direction | 105 | 128 | 143 | 119 | 134 |
| Maximum Roadless Recreation Benchmark | 127 | 184 | 206 | 268 | 342 |
| Anticipated Demand | 128 | 142 | 157 | 175 | 195 |
| Wilderness Use (1000 RVDs) | | | | | |
| Current Direction | 65 | 80 | 89 | 99 | 111 |
| Maximum Roadless Recreation Benchmark | 76 | 92 | 103 | 115 | 128 |
| Anticipated Demand | 98 | 118 | 132 | 147 | 164 |
| Range - Permitted Grazing (1000 AUMs) | | | | | |
| Current Direction | 64 | 67 | 65 | 64 | 62 |
| Maximum Range Forage Benchmark | 89 | 99 | 98 | 101 | 101 |
| Anticipated Demand | 70 | 75 | 85 | 85 | 95 |
| Allowable Sale Quantity (Million Board Feet) 1/ | | | | | |
| Current Direction | 74.4 | 62.4 | 59.4 | 50.5 | 50.5 |
| Maximum Timber Benchmark | 96.6 | 99.0 | 99.0 | 99.0 | 99.0 |
| Anticipated Demand 2/ a) | 128.4 | 132.3 | | | |
| b) | 86.1 | 86.1 | 84.0 | 84.0 | |

1/ First decade harvest in millions of board feet from FORPLAN solution. Board foot harvest for second and fifth decades calculated from FORPLAN estimates of cubic foot volumes using board foot to cubic foot conversion ratio of 4.95 from Table G-1, Regional Guide for the Pacific Northwest Region.

2/ From Hutchins (1981). a) Disaggregated from Haynes, Connaughton and Adams (1980); b) from Bolsinger (1975)

Key issues and concerns are also discussed, with reference made to RPA targets where appropriate. These issues and concerns include more variables than just those for which meaningful demand projections have been made.

1. **Timber**

   Of the eight benchmarks, the maximum first decade timber volume offered for sale is 97 MMBF/year (20.0 million cubic feet/year), including lodgepole pine. This is somewhat greater than estimated demand by Bolsinger 1975, and about 75% of estimated demand by Haynes et al. 1980. The timber benchmark falls nine percent short of the 1980 RPA target. The timber decision space is between 0 and 700,000 acres and the intensity of managing those acres. The resultant decision space is 0 to 97 million board feet per year.

2. **Range**

   Forage consumption by domestic animals (AUMs) is not a direct decision of this planning effort, but the ability to provide is a consequence of these decisions. The range in values is from zero, if existing contracts are not renewed, to 89,000 AUMs under intensive, multiple-use management.

   The 1980 RPA targets can be met, but not while maximizing other resource values. Current consumption levels can be met.

3. **Roadless Areas**

   The Okanogan National Forest has 14 roadless areas totaling 481,000 acres. 71,000 of these acres are in the North Cascades Scenic Highway. The decision space varies from protecting 107,000 to 481,000 acres of roadless recreation opportunities during the next 15 years. Theoretically, all 481,000 acres could be developed, but economic considerations alone would leave almost 60,000 acres undeveloped during the RPA horizon (next 50 years).

4. **Old Growth Habitat**

   The decision space for mixed conifer old growth habitat is small: 21,000 acres. The combination of MMRs and classified areas (Wildernesses and Scenic Highway) put a floor of 183,000 acres (16,000 outside classified areas). The current inventory is 204,000 acres (37,000 outside classified areas). In about 50 years from now, five percent of the existing mature mixed conifer forest could be expected to become old growth habitat - if left alone - and a similar addition would be expected each decade thereafter. Also, old growth can be created from young stands through silviculture, but the results won't be available for at least 180 years. This means the best that can be expected in the

RPA planning horizon is to protect what is present today, but over the long run more can be accomplished.

## 5. Deer

The quality of deer winter range on the Okanogan National Forest, particularly on the Okanogan Highlands, is affected by human activity and amounts of thermal and snow intercept thermal cover. As is the case with old growth, the range of possible alternatives is small. At the end of the first planning period (the year 2000), the range is only 8 percent and optimal amounts cannot be reached even with minimum level management.

## 6. Roaded Recreation and Visual Resource

The majority of the most visually significant areas on the Okanogan are protected by legislation, including 626,200 acres of preservation (wilderness) and 88,000 acres of scenic highway. An additional 210,000 acres are inventoried as `retention' and 289,000 acres as `partial retention.' Only 116,000 acres of the inventoried `retention' and 155,000 acres of `partial retention' are within the effective decision space. It should be pointed out that mining developments, while not expected, could affect any area outside the wildernesses and small areas within wilderness.

## 7. Present Net Value

The Maximum Present Net Value Benchmark has the highest PNV. Of interest is how the other benchmarks rank relative to that benchmark and to each other.

The highest resource benchmark in terms of PNV is roaded recreation, followed by unroaded recreation, wildlife and current direction. Timber and range benchmarks are further down the scale and minimum level management has the lowest projected PNV. These relative rankings are explained by:

a) the value of recreation use and wildlife/fish use on the Okanogan National Forest relative to the values of Okanogan commodity use,

b) on a per acre basis, the higher value of roaded recreation use than primitive and semi-primitive use in visually significant areas,

c) the higher value of mixed conifer stands relative to lodgepole pine stands, and

d) the costs of roading and logging, especially on some sites where those costs exceed the commercial values of the lands.

## INFORMATION NEEDS

The remainder of this chapter is devoted to listing research needs and inventory and data needs identified during the planning process and listed in the DEIS.

| PROGRAM | NEED |
|---|---|
| TIMBER | 1. Develop local yield studies for principal timber species growing in managed conditions. Yield studies should be specific to productivity class. Incorporate into timber yield simulators and published yield tables. |
| | 2. Develop quantitative estimates of the short and long-term impact of animal damage, insects and disease upon growth and yield of forest timber stands. Incorporate into timber yield simulators. |
| | 3. Develop techniques for obtaining regeneration by natural and artificial means in harsh, high elevation sites. |
| | a. Develop effective techniques for reforesting steep terrain where growth environments are severe, and where competing vegetation exists. |
| | b. Better describe the interactions of site factors such as temperature, available moisture, energy budgets, presence or absence of organic matter in the soil profile and the germination and growth requirements of commercially important local conifer species. |
| | c. Determine the recovery rate of natural vegetation following disturbance. Determine the invasion or establishment rates of competing vegetation following harvest of timber stands under various silvicultural systems likely to be used. |
| | d. Develop criteria to identify sites where artificial methods (planting) are necessary to reforest within a reasonable period following harvesting. |

4. Develop silvicultural methods to regenerate timber sites where year-long or seasonal high water tables occur following timber harvest.

5. Determine biomass retention needs based upon plant association. Research should identify the level and kind of residue material to be left on-site following timber management or other vegetation manipulation activities to provide for nutrient cycling, micro site amelioration for conifer establishment, and for non- game wildlife habitat needs.

6. Define the physiological and ecological interactions of noxious weeds, exotic seeded grasses, native grasses and shrubs, and commercially valuable conifer species.

    a. Identify those plant associations (growth environments) where noxious weeds are effective competitors with native vegetation.

    b. Determine the recovery period following disturbance required in different plant environments for native vegetation to regain dominance of the site. Identify those plant associations where natural vegetation is unlikely to regain dominance within a reasonable period of time.

    c. Develop control strategies for containing noxious weed incursions on the forest, and for reducing noxious weed populations where established.

    d. Better describe the role of fire, biological agents, herbicides and natural succession in preventing, containing or controlling noxious weed invasion and establishment following disturbance of a forested environment. Research should identify those plant associations where given methods are appropriate for use.

7. Develop logging and manufacturing techniques appropriate for use in small size timber such as existing lodgepole pine stands, and which will be produced in future mixed conifer stands. Develop logging and marketing technology for stands now considered to be below minimum merchantable size.

8. Develop market area strategy for small diameter material. Explore alternatives for utilization including biomass for energy production, small product, wood chipping, etc. Define market area, and identify barriers to effective use of forest resources (ex: transportation, manufacturing facilities, labor pool, capital availablility, etc.) and identify possible solutions.

9. Develop locally applicable fertilization studies. Identify specific species and plant association/soil series complexes that will respond predictably to fertilization in an economically attractive manner.

10. Define the increased volume growth possible from selectively breeding locally important conifer species under various levels of selection intensity growing under environmental conditions and management regimes similar to those on the National Forest.

11. Develop silvicultural techniques for managing existing timber stands by uneven-aged methods. Develop estimates of yield and growth models applicable to uneven-aged systems. Develop economical methods to minimize or control insect and disease losses in multiple canopy stands.

12. Develop information and guidelines for the appropriate methods of seeding exotic or native grass and shrub species (species, application rate, timing, plant association) to achieve silvicultural objectives.

a. As a silvicultural tool for achieving stocking control in plant associations where natural regeneration is over-abundant.

b. As a method to stabilize soils while minimizing competition with desired tree regeneration.

c. What species of natural or exotic grasses, forbs and shrubs should be avoided to minimize animal damage (gophers, deer, livestock) problems in seedling/sapling conifer stands?

13. Develop strategies for the use of ungulate grazing as a vegetation management tool that might accomplish site preparation for conifer regeneration, or promote growth on established conifer saplings and poles.

14. Develop data base (inventory) and analysis techniques to identify sites that are uneconomical to manage for timber production given the anticipated variation in production costs and price.

15. Develop a forest inventory based upon all forested lands. Sample suitable and unsuitable lands. Identify and inventory lands by productive potential and other important characteristics.

SOIL AND WATER

1. Develop thresholds of sediment production for cumulative effects on the soil and water resource considering the values of the water from the watershed.

2. Update the current Soil Resource Inventory. The mapping units should more fully integrate the natural features of the landscape that affect management decisions and resource allocations.

WILDLIFE

1. Ascertain whether the Okanogan National Forest is in the normal range of the spotted owl.

2. Ascertain whether grizzly bears occur on the Okanogan National Forest.

3. Refine inventory of different cover types, especially on deer winter range.

4. Conduct baseline survey of mountain goat habitat to define critical sites and needs for implementation of site specific projects and protection.

| | |
|---|---|
| | 5. Refine inventory of snags and the relationship between timber management and future snags. |
| | 6. Define potential of streams to provide fisheries for site specific improvement projects and protection measures. |
| | 7. Survey riparian areas and classify according to condition and priority for vegetative management, protection or rehabilitation for implementing habitat improvements, timber management and grazing. |
| | 8. If the Okanogan National Forest is found to be within the normal range of the spotted owl, define what habitats and management are needed in environments east of the Cascade Crest. |
| | 9. Ascertain the potential of habitat to support viable populations of grizzly bears. |
| | 10. Define the relationship of lodgepole pine management to lynx populations. Contribute to recent efforts by Washington Department of Game to monitor lynx activity in generally unmanaged stands, which have provided a basis from which to continue research both during and after proposed large scale lodgepole pine management. The situation is a unique opportunity in the lower 48 states. |
| RECREATION | 1. Determine user (visitor) needs and expectations for recreation opportunities. |
| CULTURAL RESOURCES | 1. Develop a predictive modeling strategy to improve the ability to locate prehistoric cultural resources in a cost effective manner. |
| RANGE | 1. Identify plant associations highly susceptible to noxious weed invasion. |
| RECREATION | 1. Refine recreation carrying capacity figures for recreation opportunities outside developed sites. |

WILDERNESS

1. Refine wilderness carrying capacity figures.

2. Define the base level condition for the Air Quality Related Value of visibility within the Pasayten Wilderness.

3. Determine additional Air Quality Related Values (AQRV's) necessary to maintain the wilderness character in the Pasayten Wilderness as defined in the Wilderness Act. Determine base level conditions for these additional AQRV's.

11

## Chapter 3

# RESPONSE TO ISSUES AND CONCERNS

This chapter of the Forest Plan shows how the management plan addresses and responds to major public issues and management concerns identified during the planning process.

### SOIL, WATER AND AIR

HOW WILL ECOSYSTEMS AND ENVIRONMENTAL QUALITY BE PROTECTED?

Background - Road building and logging influence the soil resource and water quality. Certain soil types can be susceptible to erosion or mass failure, and others can be compacted through tractor logging. Yarding of logs can also affect the amount of suspended sediment in a stream.

Local loss of visibility by burning wood wastes from logging operations is the principal reason for reductions in air quality. Smoke management requirements restrict burning to periods when weather conditions are favorable for dispersal of smoke into the upper atmosphere and away from population centers or other smoke-sensitive areas.

Response - Implementation of the Proposed Action will result in 7,400 tons of Total Suspended Particulates produced from the prescribed burning of logging slash and 326 thousand tons of sediment yield produced both naturally and by road construction. These factors combined are principally responsible for changes in ecosystem and environmental quality. Trade-offs between resource production and environmental quality will be reduced through mitigation measures associated with individual timber sale plan implementation. Overall ecosystem and environmental quality will be protected through Federal and State laws and Forest Plan standards and guidelines.

HOW WILL RIPARIAN AREAS BE PROTECTED?

Background - Riparian areas (wetlands, lakes and streams and their immediate areas of influence) are important ecosystems. Disturbance of these areas through logging or grazing can degrade both water quality and wildlife habitat. Livestock tend to congregate around riparian areas because they are the "ice cream" spots.

Creating buffers or no-cut areas around and along riparian areas can cause problems for current and future logging plans in adjacent areas. Requirements to protect streams can increase logging costs.

These areas are important from the recreation standpoint because most existing recreation developments are located here.

Response - A wildlife management emphasis will be implemented in all riparian areas except in Management Area 5. While some timber removal and livestock use will be allowed in the riparian areas, wildlife and fish values are emphasized. Water and soil values will be maintained in the riparian zone.

## MINERAL DEVELOPMENT

### WHAT MINERAL RESOURCE ACTIVITIES WILL BE ENCOURAGED?.

Background - Developing access is the most important way the forest can provide opportunities for mineral exploration. The greater the amount of roaded area, the easier the exploration process.

Much of the concern over minerals is about minerals development, which is not an issue that will be resolved by this plan. Individual proposals will require a separate environmental analysis.

Response - The proposed Forest Plan would provide improved minerals accessibility relative to current direction, mainly due to a greater allocation of high and medium-high minerals areas to less restrictive prescriptions. No additional lands would be proposed for withdrawal from mining and mineral leasing laws and about 3,200 acres of existing withdrawals would be recommended for revocation. Under this proposal 38 percent of the forest would be withdrawn, 8 percent would be included in prescriptions having high access restrictions, 22 percent with moderate, and 32 percent with low access restrictions.

## FIRE

### HOW WILL FIRE BE MANAGED?

Background - Past Forest Service fire management policy directed that forest fires be attacked with sufficient forces to gain control of all fires as quickly as possible. Each wildfire was suppressed regardless of vegetative type, burning conditions, fuels or land management objectives. To ensure that resources were available to implement this policy, costly expenditures were required on each National Forest for personnel, equipment and aircraft support. Costs of fire suppression have, at times, exceeded overall resource losses. This imbalance in the costs to benefits for fire protection, coupled with new knowledge gained about the role of wildfire and prescribed fire within forest and range ecosystems, prompted the Forest Service to revise its overall fire management objective in 1978.

Current fire management policy directs each National Forest to develop and implement fire protection and fire use programs that are cost effective and responsive to land and resource management goals and objectives. The protection of the public, capital investments located on the forest and private land within and adjacent to the forest carries the highest priority when using suppression resources.

Wilderness and unroaded recreation areas have the lowest priority for fire protection because of the role of wildfire in shaping the natural ecosystem within these areas. Confinement of fires within these areas is a common practice. The suppression response to each wildfire in wilderness and unroaded recreation areas is dealt with on a case-by-case basis.

Response -The Proposed Plan will establish levels of fire protection (i.e. wildfire suppression) based on resource values protected, potential suppression cost, threat to the public and capital investments, and the positive and negative effects of wildfires on the resource management objectives of each management area.

The Proposed Plan will allow lightning fires to burn under a confinement strategy within the forest's 880,000 acres of wilderness and semi-primitive recreation management areas. Wildfires will be allowed to burn under the confinement fire strategy within the majority of the semi-primitive recreation acres (Tiffany, Mt. Bonaparte, Liberty Bell and Sawtooth Roadless Areas), North Cascade Scenic Highway, and mountain goat habitat management areas. However, if any confinement fire within these management areas poses a threat to capital investments, significant cultural resources, or has the potential to leave the area, the wildfire will be contained or controlled.

Containment will be the primary suppression strategy for the 49,000 acres allocated to a range management emphasis with no timber harvest. All wildfires on the remainder of the forest's 777,000 acres will be contained or controlled to minimize potential resource loss evaluated against the expected cost of suppression.

The Proposed Plan allows for the use of prescribed fire in support of timber, range, hazard reduction and wildlife management activities.

## ROADS AND ACCESS

HOW WILL THE OKANOGAN NATIONAL FOREST ROADS BE MANAGED AND ACCESS TO THE FOREST BE PROVIDED?

Background -In the past, the Forest Service has built roads to standards that accept or encourage highway vehicles. Because most roads now constructed on this forest are used primarily as access for timber management, roads could be constructed to a level that accepts only high clearance vehicles. This reduces timber management costs, and if roads are "put to bed" or barricaded following timber management activities, future savings in road operations and maintenance costs could be realized.

However, these actions limit the amount of roaded access provided to the general public. Higher road standards from the past have accustomed people to being able to drive wherever they want. Limiting access now and in the future means that new roads will not be available for motorized access for woodcutting and other recreational activities. Not limiting motorized access in the future will mean that operational costs and wildlife habitat degradation will increase.

Response - The National Forest transportation system is planned, constructed and managed to facilitate planned Okanogan National Forest land and resource management objectives. The road standard is a direct result of the objectives the road is intended to serve. The cost of construction and maintenance is a direct result of the road standard and operation. For example, a road constructed for only logging vehicles will typically be narrow, closely follow the topography (numerous sharp curves and abrupt changes in grade) and have a rough surface. This road will cost a minimum to construct and will cost a minimum to maintain, if used only during suitable weather and blocked after logging use.

Any additional objectives that require use by more and different vehicles, or extend the time of use will significantly increase road construction and maintenance costs. For example, if the above road will also be used for firewood gathering after the timber sale, the road will be used for a longer period of time, and maintenance costs will increase. If the road is to be used concurrently by logging vehicles and recreationists, the road standard will increase (smoother surface, wider road, and straighter horizontal and vertical alignment) and road construction and maintenance costs will significantly increase.

The Forest Service classifies roads in one of the following three categories:

1. Arterials - Roads forming a link between towns or serving a major drainage or other major traffic generator. The Middle Salmon-Boulder Road No. 37 over Baldy Pass is one example.

2. Collectors - Roads usually tributary to arterials. May or may not be connecting routes. The Eightmile Road, No. 5130, from the Chewuch Road, No. 51 (an arterial), to Billy Goat Corral is a collector.

3. Local - Usually short, dead-end roads that serve a limited number of resources.

The forest has approximately 508 miles of arterial and collector roads. Most arterial and collector roads are managed for general public use except for restrictions of short duration for heavy log haul. Approximately 1,638 miles of local roads are present; 504 miles of these are blocked, 654 miles are for high clearance vehicle use and 480 miles are for highway vehicle use. Local roads are subject to seasonal use restrictions for wildlife habitat protection, use conflicts between recreationists, and use conflicts between recreationists and commercial hauling. Newly constructed local roads will generally be for high clearance vehicle use only. An average of 44 miles of local road will be constructed per year with most newly constructed road available for public use at least seasonally for a period of approximately two years. Essentially all needed arterials and collectors are in place.

## WILDERNESS

### HOW WILL WILDERNESS AREAS BE MANAGED?

Background - The Wilderness Act of 1964 is very restrictive in what activities can and cannot occur within designated wilderness. However, decisions can still be made regarding such topics as fire management, recreation use, grazing levels, administrative cabins and dams (which require the President's approval).

Conflicts arise because some people feel the wilderness experience should not include livestock grazing. The Wilderness Act allows for continuance of livestock grazing in areas that were grazed at the time an area was designated wilderness. Grazing levels are to be determined by forest managers.

Fire has played a major role in the shaping of many of the ecosystems found within wilderness. The cost of fire suppression has prompted use of a confinement fire suppression strategy within the Pasayten and Lake Chelan-Sawtooth Wildernesses. Under this strategy, certain wildfires are allowed to burn out naturally within natural breaks and barriers. Fires that threaten significant (eligible) cultural resources or capital investments, threaten to cross the U.S.-Canadian border or enter an area with a different fire management prescription, or where off-site impacts would be unacceptable would be contained or controlled.

Levels of recreation use have increased in recent years, particularly along major trail routes, and are expected to continue to increase. The question arises: how much use is acceptable before access to the wilderness is limited?

Although the Wilderness Act allows the construction of dams, such construction requires the approval of the President. Many people feel that this is no guarantee that dams will not be constructed and are therefore seeking Wild and Scenic designation for the Pasayten River (the entire United States portion of this river is located in the Pasayten Wilderness), and those portions of the Chewuch, Twisp and Lost Rivers, and Wolf Creek in wilderness.

Response - The Proposed Plan will manage both the Pasayten and Lake Chelan-Sawtooth Wildernesses to preserve solitude and natural ecosystems. Much of the western portion of the Pasayten Wilderness will be managed in a trailless condition, with large areas accessible only by rigorous cross-country travel. The eastern two-thirds of the Pasayten Wilderness and most of the Lake Chelan-Sawtooth Wilderness will be managed to provide limited trailed or trailed access to most areas, but trail conditions will tend to be more difficult than on trails outside wilderness. No new trailheads will be constructed that will increase visitor use or distribute visitors into areas that currently receive light use.

Structures and improvements will be reviewed and phased out if not essential for protection or administration.

Grazing of domestic livestock will continue in areas currently grazed and current stocking levels will be maintained.

The potential wild classification of those portions of the Chewuch River, Twisp River, Lost River, Pasayten River and Wolf Creek eligible for inclusion in the National Wild and Scenic Rivers System will be retained.

Human-caused fires will be controlled. Lightning-caused fires will be confined unless they threaten significant cultural resources or capital investments, threaten to cross the U.S.-Canadian border or enter an area with a different fire management prescription, or off-site impacts will be unacceptable. In any of these cases, fires will be contained. Prescribed fire will not be used.

## ROADLESS AREAS

HOW WILL THE OKANOGAN NATIONAL FOREST MANAGE ROADLESS AREAS?

Background - The future management of roadless areas will directly affect both the amount of timber volume the Okanogan National Forest can produce, and the amount of area remaining suitable for wilderness designation under future plans.

The Washington State Wilderness Act of 1984 determined that for those National Forest lands reviewed during RARE II, "that review and evaluation or reference should be deemed for the purpose of initial land management plans to be adequate consideration of the suitability of such lands for inclusion in the National Wilderness System and the Department of Agriculture shall not be required to review the wilderness option prior to the revision of the plans." The option of future wilderness designation was not foreclosed.

Suitable roadless area may be designated wilderness in the future. Maintaining areas in an unroaded, unaltered condition of sufficient size can maintain wilderness suitability.

The present roadless areas have not been contributing to the Okanogan National Forest's annual harvest goal, even though the roadless area acres were used to determine that goal. This places a greater burden on the easier-to-access areas of the forest to provide that remaining volume, affecting the other resources in those areas.

These areas also provide a variety of recreation opportunities, wildlife habitat and large supplies of water.

Maintaining large blocks of roadless areas tends to discourage mining activities within those areas, because access is more difficult. This is also seen as beneficial by some.

Response - The Proposed Plan will manage the 14 inventoried Roadless Areas to help meet the demand for a variety of goods and services.

Semi-primitive non-motorized and semi-primitive motorized recreation opportunities will be provided in portions of the Tiffany, Mt. Bonaparte, Liberty Bell and Sawtooth areas. No timber harvest will occur in those areas. Roaded Natural recreation opportunities will be provided in those portions of the Granite Mountain, Long Draw, Long Swamp, Pasayten Rim, Liberty Bell and Sawtooth areas viewed from heavily traveled roads. Timber harvest levels will be reduced in those areas.

Research Natural Area opportunities will be provided in the Clackamas Mountain, Tiffany and Sawtooth areas.

Habitat for a variety of wildlife species will be provided in all areas. Emphasis will be on providing deer winter range and a diversity of wildlife habitat in the Jackson Creek, Bodie Mountain, Clackamas Mountain, Hungry Ridge, Black Canyon, South Ridge, Granite Mountain and Sawtooth areas. Lynx habitat opportunities will receive emphasis in the Granite Mountain, Long Draw and Long Swamp areas. Mountain goat habitat will be provided in the Pasayten Rim, Liberty Bell and Sawtooth areas.

Over time, timber harvest will occur in portions of all roadless areas except Liberty Bell. Less than two percent of the existing roadless area would be accessed prior to 2000.

## TIMBER MANAGEMENT

### WHAT IS THE APPROPRIATE TIMBER HARVEST LEVEL?

Background - The objectives of vegetative management directly affect the volume of timber that the forest can harvest each year and over the long-term. Retaining cover in deer winter range, snags for non-game wildlife, big trees for scenic vistas or open timber stands for range forage (to name a few), all affect timber yields.

Management for high timber yields in the short and long-term may cause reductions in some forms of wildlife habitat (for example, cover in deer winter range or snags) or reduce the scenic values of some parts of the forest. Timber harvesting at lower levels may be necessary to provide wildlife habitat, large trees in scenic areas, and open timber stands for range forage production.

The wood products industry is an important part of the Okanogan County economy. High harvest levels will provide employment in logging, manufacturing and related occupations. Large increases or decreases in timber offered for sale from the National Forest could be expected to result in increases or decreases in timber harvested in the area, and therefore affect the number of jobs generated in Okanogan County.

Response - The Proposed Plan will harvest approximately 798 million board feet of timber during the next decade (about 80 million board feet per year). This harvest level is 5 percent less than the level called for under the 1969 Timber Management Plan. Harvest levels in each of the next three decades will continue to decline. The higher harvest level during the coming decade, and the gradual decline in harvest will permit forest industry to adjust to declining supplies from the National Forest. Harvest levels were determined with consideration for areas of high scenic value where large trees would be retained, and the need to provide habitat to various forest dwelling wildlife species.

## HOW WILL WOOD WASTE BE UTILIZED?

Background - Timber harvest, construction of roads and the cutting of unwanted trees within young growing stands produce varying amounts of wood waste. Most of this material is in the form of branches, tree tops and broken tree trunks.

The wood waste material that remains on the site may act as a fire hazard, in some instances it may impede successful regeneration of new trees on the site, or it may act as a travelway barrier to domestic livestock and deer. On the other hand, retention of wood waste provides for nutrient recycling, wildlife habitat for small mammals, rodents and other non-game species, and shade for seeding survival on harsher growing sites.

Wood waste that remains on-site following activities is popular for firewood cutting. Large diameter standing snags and windfall outside timber sale areas are also popular for firewood cutting. Increasing public demand for firewood is reducing the number of standing snags and down logs required for maintenance of certain wildlife habitats, especially where closely spaced roads provide ready access to the firewood cutter.

Response - The harvesting of timber under the Proposed Plan will annually produce over 1,031,000 cubic feet (i.e. 11,500 cords) of wood waste available to the public for fuelwood cutting during the next decade. Fuelwood will only be provided where scenic quality and wildlife habitat management objectives can be met. Accessibility of the fuelwood to the public will be the greatest during the first decade, because the majority of the harvest activities will occur on gentle terrain. Total availability will decline in future decades because logging will increasingly occur on steep ground that is less accessible to woodcutters. Future use of wood waste by industry for wood chips and other products will further lessen future fuelwood gathering opportunities on the forest.

## WHICH SILVICULTURAL TREATMENTS WILL BE USED?

Background - Silvicultural treatments greatly influence the scenic quality of an area. Uneven-aged management maintains forest cover at all times, thereby lessening the visual impact of timber management. Even-aged management such as clearcutting and shelterwood cutting results in the removal of most understory vegetation. Clearcutting removes all trees, while shelterwood cutting retains mature trees on-site for a period of time until new trees become established. The mature trees are then removed.

The types of silvicultural treatments applied can directly affect costs and timber yields. Uneven-aged management may be more costly than even-aged management because residual trees must be protected and, during the life of the timber stand (rotation), harvest cuttings are more frequently made. In most cases more volume per acre is harvested under even-aged management than under uneven-aged management.

The presence of insects or diseases may be affected by the silvicultural treatments. Treatments that create timber stands containing trees of many ages and sizes produce favorable conditions for the spread of forest insects and disease.

Silvicultural treatments may affect the long-term productivity of the soil. Treatments that require frequent re-entry often results in greater damage to forest soils.

Response - Even-aged management will be practiced in the majority of timber stands managed for timber production. Harvest methods used in mixed conifer stands will generally involve clearcutting, seed tree cutting and shelterwood cutting. Overstory removal cuttings may occur where past harvesting or natural conditions have produced stands containing healthy conifer regeneration. A small amount of commercial thinning may occur during the next decade in mixed conifer stands. Harvest methods in lodgepole pine stands will primarily involve clearcutting. Precommercial thinnings may occur in young stands found both in mixed conifer and lodgepole pine types. Uneven-aged management will be practiced primarily in low productive mixed conifer and lodgepole pine stands. Both group selection and single tree selection may be used.

## WHICH LOGGING METHODS WILL BE USED?

Background - The logging methods chosen for a harvest site can greatly influence both the costs involved in logging and the amount of resource damage that occurs on a site. Cable and helicopter logging can mitigate potential impacts on compactible soils or steep slopes, because logs can be fully or partially suspended above the ground. Horse logging can also mitigate impacts on gentle ground because horses weigh a great deal less than tractors (the usual logging system on gentle ground). However, costs are greatly increased with any of these systems as compared to tractor logging.

There is also a correlation between logging system and access. If roads cannot be constructed or are too expensive to construct, a site may only be accessible by helicopter or long span skyline systems. This in turn increases reforestation and precommercial thinning costs.

Helicopter and horse yarding systems tend to cause less site disturbance, and allow the retention of ground vegetation, which makes the site more visually pleasing following logging. However, following logging it is often necessary to remove much of the ground vegetation in order to reforest the site.

Response - Logging methods will be selected based upon site specific interdisciplinary analysis of resource conditions during project level planning. The logging system selected must be the most cost effective method of removing logs from the woods that will protect inherent productivity and meet management objectives for the stand. All logging systems, including tractors, horses, cable (skyline and highlead) and helicopter systems will be used where necessary and appropriate.

## HOW WILL LODGEPOLE PINE STANDS BE MANAGED?

Background - About 90,000 acres of the Okanogan National Forest outside of wilderness (approximately 10 percent of the total non-wilderness lands) are in dense, mature lodgepole pine stands. Forest entomologists predict that the conditions are ripe for a major outbreak of mountain pine beetle in these stands within the next 10 to 20 years unless the stands are harvested. One result of this outbreak would be large volume losses in mature lodgepole pine stands.

The largest lodgepole pine areas on the forest are also habitat for what has been reported to be the highest density of lynx over the largest single area in the 48 contiguous states (Brittell 1984). However, lynx numbers are declining because the species depends on early successional stages of lodgepole pine. The majority of existing lodgepole pine is now mature. A major outbreak of insects or fire would produce a boom or bust situation, where the lynx would have increased habitat (young lodgepole pine stands), but other species relying on later successional stages (mature) would be displaced. Later, when the trees matured, the lynx would again be on the decline.

Harvest of selected lodgepole pine stands at this time may forestall an insect outbreak. Creating a mozaic of successional stages throughout the lodgepole pine stands using prescribed fire or timber harvesting would benefit wildlife, especially the lynx.

The demand for lodgepole pine in Okanogan County historically has been low because of low harvestable volume, lack of developed access and lack of existing markets.

Response - Approximately 18 million board feet (3.5 million cubic feet) of lodgepole pine will be harvested annually by the Proposed Plan during the next decade. In most cases lodgepole will be harvested by clearcut or seed tree methods. Harvested stands will rapidly regenerate forming stands of seedlings and saplings in succeeding decades.

Harvesting will reduce the hazard from mountain pine beetle while increasing the acreage in young stands needed for lynx habitat. The forest will provide a sustained level of lodgepole pine harvests necessary to support local manufacturing facilities and industries.

## RANGE MANAGEMENT

WHAT IS THE APPROPRIATE LEVEL OF GRAZING ON THE FOREST?

Background - Conflicts can arise between grazing and recreation, wildlife and timber management. Domestic livestock and wildlife may compete for some of the same species of plants for food. Timber harvest usually results in opening or removal of the tree canopy, allowing understory vegetation, such as grasses to flourish. These grasses either seed naturally or are seeded to enhance the area for grazing, erosion control or to prevent invasion by noxious weeds. This increase in understory vegetation creates "transitory range" suitable for domestic livestock grazing. However, encouraging livestock in these areas may result in delays in reforesting the area with trees.

Response - Grazing at a level of 65,200 Animal Unit Months (AUMs) can be managed without much conflict with other functions. This is an increase of seven percent of the existing situation.

## THREATENED, ENDANGERED AND SENSITIVE SPECIES

HOW WILL THREATENED, ENDANGERED OR SENSITIVE ANIMALS BE MANAGED AND AFFECTED?

Background - The grizzly bear, bald eagle and gray wolf have historical range that covers all or part of the Okanogan National Forest. None of these species are known to reproduce on the forest, and only the bald eagle has been seen in recent years. No critical habitats for these species have been identified on the forest.

The Pacific Northwest Region spotted owl management plan (Regional Guide) directs National Forests in the Region include direction for spotted owls but the direction is directed toward west-side forests. Furthermore, the Regional Guide is being supplemented and a different decision as to spotted owl management may result.

The northern spotted owl has gained widespread attention throughout the Northwest in recent years. This sensitive species is an indicator animal for old growth forests. As old growth is harvested, the population of these birds has been on the decline, which indicates a trend that other old growth dependent species are also being affected. Forest management is currently attempting to maintain "viable" populations of spotted owl. Disagreement has arisen on how much old growth is necessary to maintain a viable population, especially because most spotted owls have been found and traditional habitat is located west of the Cascade Crest.

Response - Habitat capability will remain constant for threatened, endangered and sensitive species. All management activities will protect habitat values.

## RESEARCH NATURAL AREAS

HOW CAN THE OKANOGAN NATIONAL FOREST HELP MEET IDENTIFIED NEEDS OF THE RESEARCH NATURAL AREA PROGRAM?

Background - The scientific community has expressed the need to provide for areas representative of different ecotypes for scientific research. The Pacific Northwest Region, Forest Service, has identified certain biological cells that this physiographic area should provide as Research Natural Areas (RNAs). The Wolf Creek Natural Research Area is the only RNA on the Okanogan National Forest. This RNA fulfills the need for the bitterbrush/bunchgrass biological cell.

Response - The forest can look for suitable areas to fulfill the identified biological cells and suggest suitable areas for review to the Research Natural Area Committee. After review for suitability by the committee; the forest can proceed with establishment reports. While the proposed areas are awaiting Washington Office approval or rejection, they should be managed by Research Natural Area standards. Two Research Natural Areas are proposed on the Okanogan National Forest: Tiffany Mountain and Maple Mountain. The Wolf Creek Area is already an established Research Natural Area.

## WILDLIFE AND FISH

HOW WILL THE OKANOGAN NATIONAL FOREST ENSURE THE MAINTENANCE OF BIG GAME POPULATIONS?

Background - Vegetation manipulation can greatly affect big game populations in the Okanogan National Forest. Timber management has reduced the amount, quality and distribution of cover for deer. This is especially true on winter range where road access for timber management is easier and more economical.

Domestic livestock grazing both on and off the National Forest has reduced the supply of quality forage available for deer on winter range. Other potential areas of conflict between livestock and big game include livestock damaging wildlife habitat improvements, mutual use of riparian areas, grazing on aspen, seeding of exotic grasses that favor livestock over wildlife, territorial displacement of wildlife by domestic sheep, and potential for sheep to disturb fawning areas.

Increased access and recreation activities also have the potential to affect big game populations. Helicopter skiing, cross-country skiing, snowmobiling and hunting may increase harassment of big game animals.

Response - Habitat capability of deer winter range will decrease slightly from existing levels, from 16,500 to 15,500 deer in the first decade. Second decade habitat capability will remain at 15,500 and increase over time to 17,400 in the fifth decade. In the Methow Valley, winter range habitat capability will be maintained at existing levels and increased by about 20% by the fifth decade. Timber management will occur in deer winter range, but snow intercept thermal cover will only be reduced in a few geographical locations. These areas are mostly found on the eastern half of Tonasket District, where cover values are more than adequate. In general, timber and access management will be designed and implemented to retain existing winter range values and increase values for the future. Outside of winter range, management activities will be designed to provide other habitat requirements for deer.

Bighorn sheep and mountain goat habitat will be managed specifically to benefit these species. Timber management, access and livestock grazing will be limited and carefully controlled.

## HOW WILL THE OKANOGAN NATIONAL FOREST PROVIDE HABITAT FOR SMALL GAME AND NON-GAME WILDLIFE SPECIES?

Background - Vegetation manipulation can affect small game and non-game populations. Timber management, firewood removal and prescribed burning have all reduced the supply of wildlife trees (snags and logs) and old growth timber stands that are imperative to the existence of many non-game species.

As explained in the timber section above, this forest has a large population of lynx, which is dependent on the early successional stages of lodgepole pine. Timber harvest can benefit the lynx and other lodgepole pine dependent species through providing a mosaic of successional stages.

Response - Habitat capability for old growth/mature indicator species will drop about 10 percent in the first decade and 16 percent by the second decade due to timber management in mature and old growth timber stands. Timber management will reduce old growth and mature conifer habitat only in areas where adequate amounts and distribution will remain. Special silvicultural practices and rotation lengths will be applied in certain stands to provide future old growth habitat.

Habitat capability for primary cavity excavators (woodpeckers) will remain at existing levels during the next two decades. Timber, firewood and access management will provide adequate amounts and distribution of snags and green tree replacements.

Habitat capability for lynx will increase by about 70 percent in the first decade and 130 percent by the second decade. Timber and access management in lodgepole pine will be designed to enhance habitat conditions in a large portion of primary lynx habitat.

Habitat capability for ruffed grouse will increase slightly (less than five percent) in the next two decades. Timber and livestock management will be designed to perpetuate and increase aspen and other deciduous habitat values.

### HOW WILL THE OKANOGAN NATIONAL FOREST PROVIDE HABITAT FOR ANADROMOUS FISH AND TROUT?

Background - Timber management practices of road building and logging can affect the amount of sediment introduced into fish bearing streams. Habitat for spawning and rearing can be covered by silt, resulting in the reduction of fish numbers, although this has not been a problem on this National Forest because the soils of this forest are relatively stable and the mitigation measures have been effective.

Road building also results in easier access to fish bearing streams, which usually results in increased recreational fishing.

Response - Habitat capability will remain constant for the next two decades. Timber, access and livestock management will be designed to minimize sedimentation and provide fish passage. The existing high water quality standards will be maintained.

## ECONOMICS

### HOW CAN THE OKANOGAN NATIONAL FOREST INCREASE ECONOMIC EFFICIENCY?

Background - Concern has been growing that the National Forests should be managed in a more economically efficient manner. But economic efficiency is defined differently by different people.

Response - The maximization of present net value was the criterion used to assure that the Proposed Action was the most economically efficient combination of outputs and activities needed to meet established objectives. Present net value (PNV) estimates the potential economic effectiveness of management of the land and water resources of the forest. PNV is the difference between the discounted value (benefits) of all outputs to which monetary values or established prices are assigned and the total discounted costs of managing the planning area. See Appendix B of the DEIS, Chapter IV, Economic Efficiency Analysis, for more discussion.

The Proposed Plan has a present net value of 287.1 million dollars. It ranked third in terms of PNV when all the alternatives were compared.

### WILL TIMBER BE HARVESTED WHERE HARVEST IS NOT COST EFFICIENT?

Background - The Okanogan National Forest has several thousand acres of forest land suitable for timber management which have high timber harvesting costs. The costs of harvest, fire protection, reforestation and road construction may exceed returns to the U.S. Treasury in these areas. Often costs may be increased by measures taken to protect valuable wildlife habitat, or to mitigate impacts on other resources such as scenic quality or seasonal recreation users.

There is growing feeling that the Forest Service should only provide goods and services where benefits exceed costs. However many people feel that the Forest Service has a responsibility to continue to provide at least the current level of jobs in the area.

Response - Timber harvest will generally occur only where the total benefits exceed the costs of timber management. Silvicultural methods used will be those that most efficiently achieve management objectives.

### WHAT WILL BE THE ECONOMIC EFFECTS UPON LOCAL PEOPLE?

Background - As explained under the "timber harvest level" issue, decreases or increases in timber offered for sale from the National Forest can be expected to result in decreases or increases in the timber harvested in the area, and therefore affect the number of jobs generated. The maintenance or increase in jobs related to forest management is a major concern of the local community. Okanogan County is one of the most economically depressed areas in the State of Washington.

Response - Employment and receipts generated by National Forest uses and products are important to local economies. The Proposed Action will provide opportunities for economic growth. This issue is closely related to the timber production issue. Timber related employment is expected to be maintained in the first decade, but decreases in subsequent decades. Realization of the economic growth opportunities will be dependent on investments by the timber industry to process lodgepole pine.

The Proposed Plan will also would provide opportunities for increased economic growth in recreation related areas. It provides for development of the Early Winters Ski Area. Such development would have the potential for stimulating significant economic growth within the area.

## SOCIAL

### WHAT WILL BE THE SOCIAL EFFECTS ON LOCAL PEOPLE?

Background - This issue concerns how the Forest Plan will affect lifestyles in Okanogan County. The area is currently rural in character, and many newer residents have moved there to "escape" urban life. They and other residents are concerned that decisions made in the Forest Plan not degrade the high quality of life they currently enjoy.

Response - To address this issue, "quality of life" has been defined in terms of changes in air quality, water quality, wildlife, population levels and recreation opportunities. The Proposed Action will decrease the current "quality of life" slightly. Most "quality of life" changes can be attributed to factors outside the domain of forest planning, so any changes as a result of the proposed action will be very minimal.

## RECREATION

### HOW WILL THE OKANOGAN NATIONAL FOREST PROVIDE FOR WINTER RECREATION OPPORTUNITIES?

Background - The primary winter recreation uses include downhill skiing at the Loup Loup Ski Area, cross-country skiing, snowmobiling, helicopter skiing and winter mountaineering. Cross-country skiing is generally compatible with the recreational experience desired by people using snowmobiles, but the reverse is not always the case. Some cross-country skiers desire peace and quiet in a natural setting; the noise created by snow machines is incompatible with this type of experience. This can lead forest managers to designate areas open to only one of the activities, thereby limiting access to the other activity. In contrast, snowmobiles may complement cross-country skiing for many users by providing tracks that allow skiers easier gliding on trails.

Winter logging is widely used on the Okanogan National Forest, and is sometimes required to meet management objectives. This results in timber sale purchasers plowing snow from the roads leading to the sale. When this happens on roads groomed or marked for cross-country ski trails or snowmobile routes, conflicts arise or winter recreation opportunities are lost.

Response - The Proposed Plan will authorize upgrading of facilities at Loup Loup Ski Area. Development of a four-season resort at Early Winters will occur.

Timber management activities and new road access will increase the availability of areas for snowmobiling and cross-country skiing by creating more open timber stands and additional routes. The resolution of potential conflicts between winter logging and snowmobiling and cross-country skiing activities will vary by area management emphasis. In areas emphasizing scenic viewshed management, the operating season for timber harvest activities will be restricted during the snowmobiling and cross-country ski season and these recreation activities generally will not be restricted to designated routes except in areas of concentrated wildlife use. The operating season for timber harvest activities in timber or wildlife management areas will not necessarily be restricted, but snowmobiling and cross-country skiing will be restricted to designated routes.

Potential conflicts between snowmobilers and cross-country skiers will be resolved on a case-by-case basis. Separation of users will be used only as a last resort.

Helicopter skiing will continue to be authorized on a case-by-case basis.

### HOW WILL THE OKANOGAN NATIONAL FOREST PROVIDE FOR OFF-ROAD VEHICLE (ORV) USE WHILE MAINTAINING OTHER RECREATION OPPORTUNITIES?

Background - The use of motorcycles and 4-wheel drive vehicles on the forest can lead to conflicts between motorized and non-motorized recreation users. Hikers and horseback riders generally find motorized use on trails incompatible with the natural environment they enjoy. Motorized vehicles can frighten horses. Decisions may be made to limit trails open to ORVs in order to lessen conflicts; the ORV user may then feel discriminated against and may also feel that not enough area is being provided for the enjoyment of their activity. A majority of the trails on the forest are either in wilderness or lead to wilderness and are closed to motorized use. This leaves very few trails available for ORV use.

Response - The Proposed Plan will provide approximately 41,000 acres of summer ORV (2-wheeled vehicles) opportunities in a unroaded setting. These areas will also be available to hikers and horse users. Conflicts between motorized and non-motorized users will continue in these areas.

Approximately 791,000 acres of unroaded land (both inside and ouside wilderness) will be closed to summer ORV use. In addition, most trails leading to wilderness will be closed to ORV use. No conflicts will occur between motorized and non-motorized users.

Approximately 206,000 acres of unroaded land outside wilderness will be available for winter ORV opportunities in an unroaded setting. Winter ORV use in some unroaded areas will be restricted if incompatible with other resource objectives. Conflicts between motorized and non-motorized users will generally be low, because access to most of these areas by non-motorized means is difficult.

For a discussion of ORV opportunities in a roaded setting, refer to the discussion under the Road and Access Management Issue.

### HOW WILL THE OKANOGAN NATIONAL FOREST PROVIDE FOR A VARIETY OF RECREATION OPPORTUNITIES?

Background - The variety of recreational opportunities has been expanding in recent years as more and more people have been trying a wide variety of activities. Recreationists may have one or more special niches into which their feelings on recreation experience fall. Some people wish to see more developed recreation sites for car or motorhome camping, while others prefer tent camping in isolated dispersed recreation sites. Still others seek a wilderness experience, carrying their camping needs on their backs.

Response - In addition to the 626,200 acres of primitive opportunities provided in the Pasayten and Lake Chelan-Sawtooth Wildernesses, the Proposed Plan will provide an additional 206,000 acres of recreation opportunities in an unroaded, semi-primitive non-motorized or semi-primitive motorized setting outside wilderness. These opportunities will be provided in portions of the Liberty Bell, Sawtooth, Tiffany and Mt. Bonaparte areas. No timber harvest will occur in any of these areas.

Approximately 179,000 acres of recreation opportunities in a roaded natural setting will be provided. These opportunities will be provided along heavily traveled roads in 5-Lakes, Toats Coulee, North Fork Salmon Creek, Middle Salmon Creek-Boulder Creek, Chewuch/8-mile, Loup Loup, McClure Mountain, Twisp River, Alta Lake, North Fork Gold Creek, Upper Methow/Hart's Pass and North Cascade Scenic Highway areas. Timber harvest may occur in most of the areas outside the North Cascades Scenic Highway but with reduced yields in order to maintain high visual levels.

Approximately 695,000 acres of recreation opportunities will be provided in a roaded modified or rural setting. These opportunities will occur in roaded areas with other than roaded recreation management emphasis. Timber harvest yields in these areas will not be reduced because of recreation objectives.

All current developed fee sites and most non-fee sites will remain in a natural setting. Remaining non-fee sites will be in a more modified setting and will receive low levels of maintenance.

## SCENERY

WHAT EMPHASIS WILL BE GIVEN TO SCENERY?

Background - The Okanogan National Forest is well known for its unique and beautiful scenery. Maintaining a natural or nearly natural appearing landscape places restrictions on the amount, type, frequency and cost of vegetative manipulation (primarily timber harvest) in an area. The amount of area allocated to a scenic designation directly affects the timber harvest goals of the forest. This may in turn affect the economic community in terms of the number of jobs available in the wood products industry.

Timber harvest can be used to enhance scenic quality through the creation of visual variety or vistas. Timber harvest can also be used to rehabilitate areas where the existing visual quality is unacceptable.

Scenic designation can be beneficial to other resources. By reducing harvest levels, habitat for some wildlife and water quality are maintained, and recreation is enhanced.

Access can be affected by scenic designations. Traditional road design often cannot meet a high visual quality level when viewed in the foreground. The road design may have to be altered (narrowed, or to follow the lay of the land). Economically feasible roads may be impossible to design to the required visual quality level. In this case, helicopter access may be required to achieve desired visual quality levels.

Access and vegetative management restrictions needed to create visually pleasing landscapes can greatly increase logging, fuel treatment, reforestation and precommercial thinning costs, or in some cases, eliminate their feasibility.

Response - In addition to providing unaltered (preservation) visual quality levels on approximately 626,200 acres of wilderness, the Proposed Plan will provide natural appearing or slightly altered (retention and partial retention) settings on approximately 388,000 acres and moderately altered and heavily altered (modification and maximum modification) settings on approximately 692,000 acres of non-wilderness land.

Natural appearing settings will be provided in unroaded areas with a semi-primitive recreation management emphasis in the North Cascades Scenic Highway and along the Hart's Pass road. Timber harvest will not occur and other management activities will be designed to maintain high visual quality levels.

Natural appearing and/or slightly altered (retention and partial retention) settings will be provided along those heavily traveled roads managed for roaded natural recreation opportunities (see response to variety of recreation opportunities above for areas to be managed for roaded natural recreation opportunities). In these areas, timber harvest and other management activities will be designed to maintain or enhance visual quality levels. Timber yields will be reduced.

Moderately altered or heavily altered (modification and maximum modification) settings will be provided in areas with other than a recreation management emphasis. Timber yields will not be reduced to meet visual objectives.

## HOW SHOULD THE NORTH CASCADES SCENIC HIGHWAY BE MANAGED?

Background - The North Cascades Scenic Highway was established through the Washington State Wilderness Act of 1984. Congress designated the highway corridor for preservation of scenic value. Congress directed the Okanogan National Forest to develop management direction for the area that recognizes the scenic values as part of the Forest Plan.

Congress did not specifically prohibit timber harvest or mineral entry in the area, but stated that any activities would have to maintain existing scenic values. This leaves a range of options open to forest managers, from allowing scheduled timber management or mineral exploration with roads, to maintaining the area in a semi-primitive, unroaded state (except the highway and current trailhead and campground developments) and withdrawing the area from mineral entry. The key phrase here is "existing scenic values."

Response - The Proposed Plan will manage the North Cascades Scenic Highway to provide a high quality visual setting (retention) while providing recreational opportunities.

Scheduled timber harvest will not occur. Timber management activities will only be permitted when necessary to enhance recreation and scenic opportunities. Insects and disease may be suppressed if they will adversely affect achieving area objectives.

Only those existing roads needed for recreational activities will be reconstructed and/or operated and maintained to encourage highway vehicles. New roads necessary to enhance recreation opportunities or to provide reasonable access to existing valid claims and/or leases will be permitted. Off-road 2-wheeled vehicle use will be encouraged on designated routes. New trails will be constructed to access special features, classified areas and recreation management emphasis areas.

New developed recreation sites and facilities and existing site expansion will be accomplished to maintain or enhance recreation opportunities or to meet recreation use demand.

Inventoried mountain goat habitat will be managed to optimize habitat conditions and to perpetuate a healthy mountain goat population.

No domestic livestock grazing will be permitted.

The existing 13,200 acre mineral withdrawal will be maintained. Federal Energy Regulatory Commission applications which are inconsistent with visual and recreation objectives will be recommended for denial.

All wildfires will be confined, except for those that threaten public safety, capital investments, or to enter areas with a different fire management strategy, in which case they will be contained or controlled.

## WILD, SCENIC AND RECREATION RIVERS

### WHAT RIVERS SHOULD BE DESIGNATED AS WILD AND SCENIC RIVERS?

Background - In order to maintain the wild, scenic and recreational qualities of nominated or designated rivers, the Wild and Scenic River Act states that such rivers "shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations." This can best be achieved by managing the drainage in which a river flows as a "Scenic Viewshed" or "Semi-Primitive" area. Please refer to the "Scenery" issue above for conflicts and complementary relationships involved in scenic viewshed management.

Response - The Proposed Plan will recommend that the Methow River be studied to determine its suitability for inclusion in the Wild and Scenic River System. The Chewuch, Twisp, Lost and Pasayten Rivers and Wolf Creek will not be recommended for study.

## CULTURAL RESOURCES

### WHAT PROTECTION WILL BE GIVEN TO HISTORICAL SITES?

Background - The Wilderness Act of 1964 states that wilderness is "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation..." The Act also states that wilderness may contain "...features of scientific, educational, scenic or historical value." Cabins in the Pasayten Wilderness have not been evaluated as to their historical value.

Response - The Proposed Plan will continue the identification and evaluation of cultural and historical resources, with priority given to completing inventories and evaluations for those areas and sites where proposed undertakings will have the greatest potential to adversely impact eligible resources.

Federal law requires the mitigation of adverse impacts to eligible historical or cultural resources which will result from any proposed federal action. Specific mitigation measures for identified eligible resources will be determined on a case-by-case basis.

Long-term protection, maintenance and interpretation needs of eligible resources will be based on evaluation results.

Consultation with the Colville Confederated Tribes, as required by the American Indian Religious Act, will continue.

## MULTIPLE-USE

HOW WILL MULTIPLE-USE OF THE OKANOGAN NATIONAL FOREST BE PROVIDED?

Background - The Multiple-Use Sustained-Yield Act of 1960 states that "'Multiple use' means the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people."

Response - The Proposed Plan will provide the following land and resource uses (annual units, first decade):

-- Provides the opportunity for 622 thousand Developed Recreational Visitor Days.

-- Modification and Maximum Modification Visual Quality Objectives on 692 thousand acres.

-- 65.2 thousand AUMs.

-- 79.8 million board feet offered for timber harvest.

-- 568 thousand acres of suitable land available for timber harvest.

-- 1.065 million acres available for mineral exploration.

## RPA

WILL THE OKANOGAN NATIONAL FOREST BE ABLE TO SIMULTANEOUSLY MEET ALL RPA TARGETS?

Forest managers are concerned that the targets assigned in the 1985 to 2030 Resources Planning Act DEIS are unreaslistic to meet simultaneously. Each target can probably be met by itself, but targets such as increasing deer numbers and increasing the timber harvest to 104 million board feet per year may not simultaneously be attainable.

Response - Analysis shows that all RPA targets cannot be provided simultaneously. The Proposed Plan provides high levels toward each target, but frequently falls short of the actual target. Specifically:

The Proposed Plan will provide adequate recreation use carrying capacity to meet RPA targets for both developed and dispersed recreation visitor days for all time periods. The Proposed Plan will have a sufficient number of trail miles needing reconstruction to meet the RPA targets for trail construction and reconstruction for all time periods. However, the amount of trail construction and reconstruction is dependent on regional priorities and annual budgets. The projected outputs for trail construction and reconstruction under the Proposed Plan will be less than RPA, but are considered more realistic.

Estimated water yield is not projected to change through time. Water yields are expected to remain nearly constant through the planning period.

Forage available will slightly exceed the target in decade one, will exceed by one thousand AUMs the next thirty years, but drop five thousand in decade five.

In relation to national wildlife habitat capability targets for selected management indicator species or species groups (page 422 of the 1980 RPA Program), the trends of mule deer and white-tailed deer will decrease by 1995 (national targets are for increases in each of these species). The habitat capability for cavity-nesting birds will remain constant and agrees with the national target of status quo. Habitat capability for resident trout and anadromous fish is expected to remain constant (national targets are for increases).

In relation to disaggregated targets specifically for the Okanogan National Forest (page 3-26 Regional Guide for the Pacific Northwest Region 1984), the expected outputs for acres of wildlife habitat improvements are less than targets. However, habitat improvement targets could be reached with appropriate wildlife funding levels. Anadromous fish habitat improvement targets are to increase pounds of fish produced. Expected fishery outputs are expected to remain constant, a fraction of RPA targets. Large-scale downstream improvements could increase migration opportunities for salmon and steelhead and potentially produce higher outputs, but such improvements are not expected during this planning period.

The Proposed Plan does not meet the RPA target for timber produced during the first and succeeding decades. Timber harvest during the first decade under the proposed action is 79.8 million board feet (15.4 million cubic feet) per year. This is 23% less than RPA.

# FOREST MANAGEMENT [illegible]

[illegible]

[illegible]

[illegible]

## Chapter 4

# FOREST MANAGEMENT DIRECTION

This chapter presents the management goals, objectives, and standards and guidelines that constitute direction for resource management covered by this plan. This chapter is organized as follows:

Forest Management Goals
Forest Management Objectives
Forestwide Standards and Guidelines
Management Area Prescriptions

## FOREST MANAGEMENT GOALS AND DESIRED FUTURE CONDITIONS

The goal of this proposed action is to produce quality wildlife habitat and high scenic values in key areas. Other resources will be managed at levels to maximize present net value.

A moderate level of timber (80 MMBF per year, 15.4 MMCF per year) will be offered for sale in the first decade. This alternative departs from non-declining even-flow during the first decade (in the next 10 years the harvest level is raised above that which could be sustained at a constant or increasing amount). The intent is to phase in a reduced harvest level to enable the local industry to adjust capacities.

Approximately 18 MMBF (3.6 MMCF) of lodgepole pine will be included in the annual timber sale program for the next 10 years. This will allow development of a market for that species, and forestall losses to mountain pine beetle. Generally, timber will not be harvested where costs exceed revenues produced.

Even-aged management will be practiced in most mixed conifer and lodgepole pine stands growing on more productive sites. Uneven-aged management will generally be practiced in low productive stands.

Harvest unit sizes will vary depending upon the objective of the management area. Some stands managed for scenic quality and wildlife habitat may be grown to ages in excess of 140 years; stands managed for timber production generally will be 60 to 110 years old when harvested.

Insect and disease in mixed conifer stands will be moderately reduced from current on-the-ground conditions. The risk of volume loss from mountain pine beetle will be greatly reduced from current on-the-ground conditions in lodgepole pine stands.

Moderate levels of wood waste will be made available to the public for woodcutting. Fuelwood will only be provided where scenic quality and wildlife habitat management objectives can be met.

Rangelands on the forest will be managed to produce approximately 65,200 Animal Unit Months of forage for consumption by cattle and sheep. Recreational pack and saddle stock is included within this amount. Range improvements will be provided in accordance with the requirements of each management area.

Wildlife habitat will be managed intensively. Most deer winter range will be managed for close to optimal snow intercept thermal cover. At least five percent of the old growth on suitable forest acres will be maintained in each township to provide for geographic distribution of old growth habitat. Snag habitat will be maintained or enhanced over current levels. Existing and potential fish habitat will be maintained or enhanced. Most riparian areas will be managed emphasizing wildlife habitat values. Mountain goat, bighorn sheep and a large portion of the lynx habitat will be managed to benefit these species.

Roaded and developed recreation opportunities will be maintained in a natural or slightly altered setting along major travel corridors, in corridors leading to developed fee sites and in the North Cascades Scenic Highway area. Downhill ski opportunities will be provided by the Early Winters and Loup Loup Ski Areas. Cross-country skiing and snowmobiling will be confined to designated routes in deer winter range areas to decrease animal disturbance.

High to moderate (retention and partial retention) visual quality levels will be maintained along major travel corridors and in roadless areas.

The North Cascade Scenic Highway will retain its outstanding scenic qualities, while providing recreation opportunities. Trails will generally be for horse/hiker only. Off-road 2-wheeled vehicle use will be encouraged on designated routes. Some trails will continue to be closed to horse use. The handicapped-accessible trails at Rainy Lake and Washington Pass will continue to be maintained. No scheduled timber harvest will occur; tree cutting will only be permitted to improve or enhance scenic and recreation opportunities. The majority of wildfires in the area will fall under a confinement fire suppression strategy. The mineral resources will be generally available for development, as long as the scenic values are protected. The existing 13,200 acre mineral withdrawal in the vicinity of Canyon and Ruby Creeks will remain.

Within the Pasayten and Lake Chelan-Sawtooth Wildernesses, human use and influence will be managed to preserve solitude and natural ecosystems. Structures and improvements will be reviewed and phased out if not essential for protection or administration. Much of the western portion of the Pasayten Wilderness will be managed in a trailless condition, with large areas accessible only by rigorous cross-country travel. The eastern two-thirds of the Pasayten and most of the Lake Chelan-Sawtooth will be managed to provide trail access to most areas, but trail conditions will tend to be more difficult than on trails outside wilderness. No new trailheads will be constructed that would increase visitor use or distribute visitors into areas that currently receive only light use. Grazing of domestic livestock will continue in areas currently grazed and at current stocking levels.

Most of the area in roadless areas will be maintained in an unroaded condition for the life of this plan (not more than 15 years), but the long range goals call for eventual development of all roadless areas except large parts of the Liberty Bell, Sawtooth and Tiffany roadless areas. These will be managed for semi-primitive recreation opportunities and wildlife habitat.

Moderate-high opportunity for roaded exploration for minerals will be provided.

The Methow River will be recommended for study to determine its suitability for inclusion in the Wild and Scenic River System.

Research Natural Area status will be maintained for the Wolf Creek area, and new RNAs will be established at Tiffany Mountain and Maple Mountain.

For further descriptions of the goals and desired future conditions of the forest refer to the map of Alternative G (departure) and the management prescriptions.

THE PLAN AT A GLANCE

| | |
|---|---|
| Timber Sales | 80 million board feet(1) |
| Even-aged harvest | 7,400 acres(1) |
| Lodgepole pine harvest | 2,200 acres(1) |
| Selection harvest | 0 acres(1) |
| Precommercial thin | 3,200 acres(1) |
| Roadless Acreage in Year 2000 | 424,100 acres |
| Wintering Deer by Year 2000 | 15,500 animals |
| Road construction | 44 miles(1) |
| Old growth Habitat by Year 2000 | 198,000 acres |
| Present Net Value | 287.1 million dollars |

(1) Average annual figures for the decade covered by the plan.

## FOREST MANAGEMENT OBJECTIVES

This section lists the objectives in narrative form and presents the projected outputs. The projected outputs identified below serve as objectives.

a. **Resource Summaries**

This section summarizes the resource outputs and schedules by program area. These resource summaries are supplemented by appendices. The appendices are not direction but are annually updated lists of information. In contrast, the resource program summaries are direction statements and, unless results of monitoring drive a different decision, will not change.

**Timber Management Program**

Timber harvest is scheduled from a base of 629 thousand acres of suitable forest lands. All harvesting during the coming decade is scheduled to occur on lands capable of producing at least 20 cubic feet per acre CMAI. The Plan calls for a departure from non-declining even-flow during the next ten years (Figure 4.1). Areas not available for scheduled timber harvest include the North Cascade Scenic Highway corridor, the Pasayten and Lake Chelan-Sawtooth Wildernesses, lands allocated to semi-primitive recreation, developed recreation and administrative sites, lands allocated to certain wildlife habitats, and lands allocated to Research Natural Areas. Timber harvest and related activities are reduced in scenic viewshed corridors; in deer winter ranges, old growth habitat, and in other areas where creation or maintenance of wildlife habitat is of concern, including riparian areas.

During the next ten years the annual quantity of chargeable volume offered for sale will be approximately 15.4 million cubic feet (79.8 million board feet). Figure 4.1 displays the long run sustained yield capacity and the allowable sale quantity projected for the next 150 years. The timber sale 10-year program, displayed in Appendix E, is a plan based on current conditions and information available. If these conditions change or if new information becomes available, the timber sales program may be modified during implementation of this Forest Plan. The degree of modification will determine whether or not a Plan amendment will be required. Chargeable volumes include only green and recently dead timber meeting minimum utilization standards contained in the Regional Guide that are harvested from suitable lands. Non-chargeable products such as cull, fuelwood, special products not meeting utilization standards and harvests from unsuitable lands are expected to be offered for sale only in incidental amounts. Approximately 11,500 cords of fuelwood will be made available annually during the next decade for personal and commercial use firewood cutting.

In order to attain this level of timber production, considerable investments will be required for transportation systems, reforestation and protection (fuel treatments, control of insects, disease and animal damage).

FIGURE 4.1 Display of Long-Term Sustained Yield Capacity and Allowable Sale Quantity

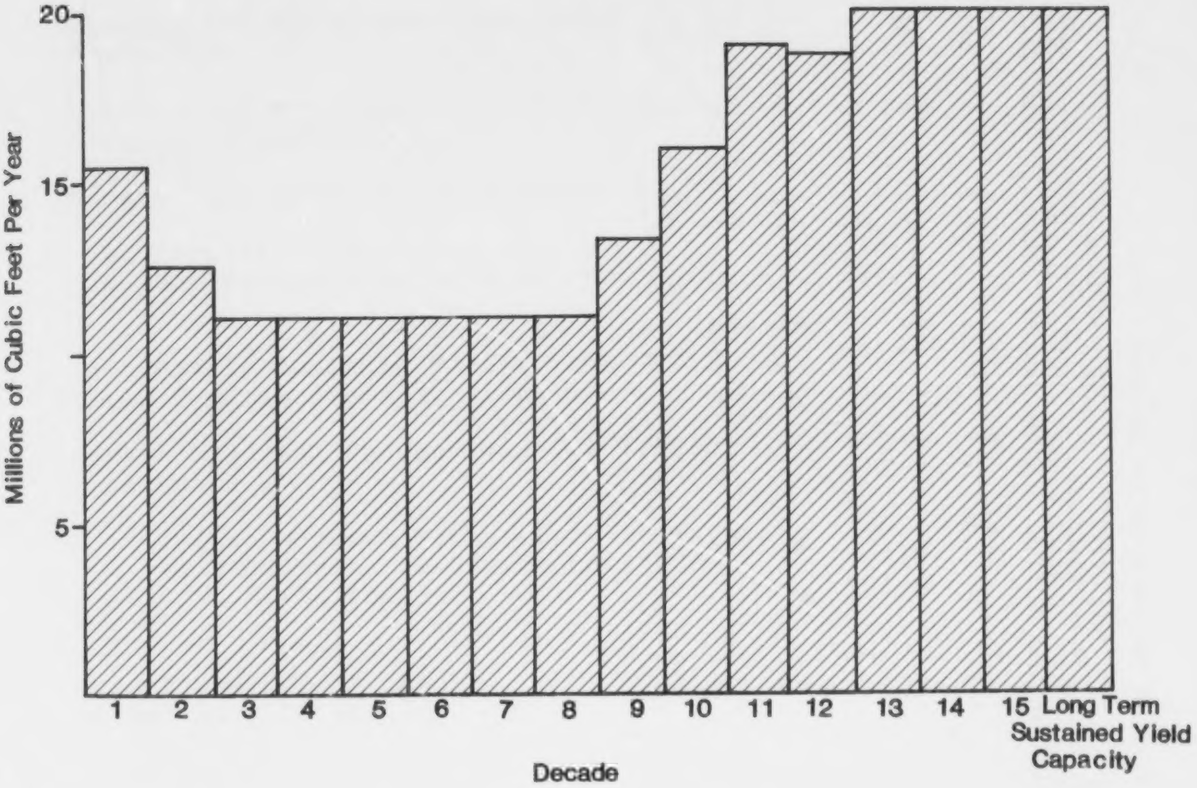

TABLE 4.2 -- Ten-Year Timber Harvest Program Goals by Working Group and Management Area

| Management Area | Units | Tonasket (03) Ranger District Mixed Conifer | Tonasket (03) Ranger District Lodgepole Pine | Tonasket (03) Ranger District Low Prod | Twisp (04) Ranger District Mixed Conifer | Twisp (04) Ranger District Lodgepole Pine | Twisp (04) Ranger District Low Prod | Winthrop (05) Ranger District Mixed Conifer | Winthrop (05) Ranger District Lodgepole Pine | Winthrop (05) Ranger District Low Prod | National Forest Totals Mixed Conifer | National Forest Totals Lodgepole Pine | National Forest Totals Low Prod |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M Acres | 19.4 | 1.7 | 0 | 16.5 | 2.6 | 0 | 11.9 | 3.6 | 0 | 47.8 | 7.9 | 0 |
|  | MMBF | 149.3 | 15.0 | 0 | 143.1 | 21.5 | 0 | 108.6 | 29.3 | 0 | 401.0 | 65.8 | 0 |
| 5 | M Acres | 1.2 | .4 | 0 | 1.0 | 0 | 0 | 1.0 | .3 | 0 | 3.2 | .7 | 0 |
|  | MMBF | 14.9 | 3.7 | 0 | 13.0 | 0 | 0 | 12.0 | 3.0 | 0 | 39.9 | 6.7 | 0 |
| 9 | M Acres | 4.6 | .8 | 0 | .2 | 0 | 0 | 0 | 0 | 0 | 4.8 | .8 | 0 |
|  | MMBF | 56.5 | 6.4 | 0 | 1.9 | 0 | 0 | 0 | 0 | 0 | 58.4 | 6.4 | 0 |
| 12 | M Acres | 2.2 | 9.0 | 0 | 0 | 0 | 0 | 1.4 | 1.8 | 0 | 3.6 | 10.8 | 0 |
|  | MMBF | 19.0 | 73.0 | 0 | 0 | 0 | 0 | 11.4 | 15.0 | 0 | 30.4 | 88.0 | 0 |
| 14 | M Acres | 4.7 | 1.1 | 0 | 2.3 | .2 | 0 | .4 | 0 | 0 | 7.4 | 1.3 | 0 |
|  | MMBF | 58.3 | 8.5 | 0 | 28.0 | 1.5 | 0 | 5.0 | 0 | 0 | 91.3 | 10.0 | 0 |
| Total | M Acres | 32.1 | 13.0 | 0 | 20.0 | 2.8 | 0 | 14.7 | 5.7 | 0 | 66.8 | 21.5 | 0 |
|  | MMBF | 298.0 | 106.6 | 0 | 186.0 | 23.0 | 0 | 137.0 | 47.3 | 0 | 621.0 | 176.9 | 0 |

TABLE 4.3 - Acres of National Forest Land Capable, Available and Suitable for Timber Production

| | Classification | Thousands of Acres | |
|---|---|---|---|
| 1. | Non-forest Land (includes water) | | 218.9 |
| 2. | Forest Land | | 1,487.3 |
| 3. | Forest Land Withdrawn from Timber Production | | 531.3 |
| 4. | Forest Land Not Capable of Producing Crops of Industrial Wood | | 0 |
| 5. | Forest Land Phlysically Unsuitable | | |
| | - Irreversible Damage Likely | 12.8 | |
| | - Not Restockable in 5 Years | 242.0 | 254.8 |
| 6. | Tentatively Suitable Forest Land (Item 2 minus Items 3, 4 and 5) | | 701.2 |
| 7. | Forest Land Not Appropriate for Timber Production | | |
| | - Due to Minimum Management Requirements | 0 | |
| | - To Meet Multiple-Use Objectives | 71.8 | |
| | - Cost Efficiency 1/ | 61.0 | 132.8 |
| 8. | Unsuitable Forest Land (Items 3, 4, 5 and 7) | | 918.9 |
| 9. | Total Suitable Forest Land (Item 6 minus Item 7) | | 568.4 |
| 10. | Forest Land - Less Adequate Information 2/ | | 61.5 |
| 11. | Suitable Forest Land Excluding Separate Suitability Component (Item 9 minus Item 10) | | 506.9 |
| 12. | Total National Forest Land (Item 1 plus Item 2) | | 1,706.2 |

1/ Tentatively suitable acres not in solution in the FORPLAN model.

TABLE 4.4: Age Class Distribution on Suitable Forest Lands 1/

| Age Class | Present Forest | Future Forest 2/ 3/ |
|---|---|---|
| | -------thousands of | acres-------- |
| 0- 19 | 17.6 | 54.0 |
| 20- 59 | 48.7 | 198.1 |
| 60- 89 | 0 | 48.7 |
| 90-119 | 45.2 | 0 |
| 120-149 | 0 | 40.2 |
| 150+ | 456.9 4/ | 227.4 |

1/ Suitable lands capable of producing 20 cubic feet per acre CMAI only.

2/ Acres with residual overstory following shelterwood or seed tree cutting shown in overstory age class.

3/ In the year 2030.

4/ Includes two-story stands.

## TABLE 4.5: Allowable Sale Quantity and Timber Sale Program Quantity (Average Annual for the Next Decade)

| Harvest Method | Allowable Sale Quantity 1/ 2/ Sawtimber --MMCF-- | --MMBF-- |
|---|---|---|
| Regeneration Harvest: | | |
| Clearcut | 6.79 | 35.0 |
| Shelterwood and Seed Tree | | |
| - Preparatory Cut | 0 | 0 |
| - Seed Cut | 7.10 | 36.7 |
| - Removal Cut | 1.39 | 7.2 |
| Selection | .02 | 0.1 |
| Intermediate Harvest: | | |
| Commercial Thinning | .10 | 0.5 |
| Sanitation/Salvage | .02 | 0.1 |
| TOTAL | 15.42 | 79.8 |

| | Additional Sales 3/ Other Products | |
|---|---|---|
| Total for all Harvest Methods | 1.20 MMBF | 5.80 MMCF |

| | | |
|---|---|---|
| Allowable Sale Quantity 1/ | 15.42 MMCF | 79.80 MMBF |
| Timber Sale Program Quantity 4/ | 16.62 MMCF | 85.60 MMBF |

1/ Includes only chargeable volumes from suitable lands.

2/ MMCF = Millions of cubic feet; MMBF= Millions of board feet.

3/ Includes only non-chargeable volumes from suitable and/or unsuitable lands, including fuelwood.

4/ Total of Allowable Sale Quantity and Additional Sales.

TABLE 4.6: Present and Future Forest Conditions Outside of Wilderness, Classified Areas and Areas Where Multiple Use Considerations Preclude Timber Management

| | Unit of Measure 1/ | Suitable Forest Land |
|---|---|---|
| Present Forest: | | |
| Growing Stock | MMCF<br>MMBF | 871.2<br>4,283.8 |
| Annual Net Growth | MMCF<br>MMBF | 9.5<br>46.9 |
| Future Forest: 2/ | | |
| Growing Stock | MMCF | 588.7 |
| Annual Net Growth | MMCF | 6.9 |
| Rotation Age: 3/ | Years | 60 to 110 |

1/ MMCF = Millions of cubic feet; MMBF = Millions of board feet. Board foot to cubic foot ratio of 4.95 used to calculate MMBF from MMCF. Board foot to cubic foot ratio derived from Appendix G of the Regional Guide.

2/ In the year 2030.

3/ Average rotation age for regenerated stands.

TABLE 4.7: Timber Productivity Classification of Suitable Lands Available for Timber Production 1/

| Potential Growth (cubic feet per acre CMAI) | Suitable Lands thousands of acres |
|---|---|
| Less than 20 2/ | 61.5 |
| 20-49 | 29.4 |
| 50-84 | 274.7 |
| 85-119 | 29.4 |
| 120-164 | 1.5 |
| 165-224 | 0 |
| 225+ | 0 |

1/ Based upon 1977 timber inventory, derived from normal yield tables. Recently completed estimates of productive potential based upon ecological classification indicates timber yield potential on the National Forest is generally less than predicted from normal yield tables (Williams 1982).

2/ Identified as Separate Suitability Component.

### TABLE 4.8: Vegetation Management Practices on Capable, Available and Suitable Forest Lands During the Next Decade

| Silvicultural Practice | Average Annual Treatments<br>----------acres---------- |
|---|---|
| Regeneration Harvest: | |
| Clearcut | 3,060 |
| Shelterwood and Seed Tree | |
| - Preparatory Cut | 0 |
| - Seed Cut | 3,050 |
| - Removal Cut | 1,140 |
| Selection | 30 |
| Intermediate Harvest: | |
| Commercial Thinning | 130 |
| Salvage/Sanitation | 30 |
| Timber Stand Improvement | 3,200 |
| Reforestation 1/ 2/ | 4,170 |

1/ Includes natural and artificial reforestation where appropriated funds and Knutson-Vandenberg (KV) are used for site preparation, planting or direct seeding.

2/ Includes reforestation resulting from timber sales and from replacement of stands containing little merchantable volume where future growth is likely to be poor because of effects of insects, disease or past suppression.

**Watershed Program**

The watershed program on the Okanogan National Forest is grouped into several parts: 1) coordinating with other resources to provide support and advice that helps protect the soil and water resource; 2) monitoring the effect of the forest plan activities on the soil and water resources; 3) updating the soil resource inventory to better integrate other resources; 4) restoring damaged soil and water resources; 5) working with the Washington State Department of Ecology or others as needed to insure water rights are secured through water rights filings or adjudications; 6) coordinating with water resource developers to provide adequate protection for the water resource as their needs are met; and 7) coordinating with other agencies or interested parties.

The major coordination with other resources will be with the timber program. Timing of support will be tied to the development of individual timber sales. It will involve initial consultation on inventory and needs of the soil and water resources through evaluation of management practices as the timber sale is completed. The specific projects are listed in the Timber Sale Schedule, Appendix E. Other coordination will be done with range, geology and minerals, fuel management, wildlife, land management planning, recreation management, engineering, and non-timber sale work such as seed orchards and fertilizer trials. Schedules for outputs from these resources, where they exist, are found in the Schedule appendices.

Monitoring of the effects of the forest plan will help determine if management practices are changing the soil and water resources. The major elements to be monitored are soil productivity, water quantity, water quality and protection of wetlands and floodplains. Details of the monitoring plan can be found in the Monitoring and Evaluation Program section of Chapter Five. Monitoring also will include the training of district personnel to collect information sent to the forest hydrologist/soil scientist. Periodic management reviews by forest and regional staff also help monitor the effects of management on the elements mentioned above.

Needs for the next major planning effort will include an updated soils inventory. Work should begin on the inventory no later than 1991 to be ready for the next revision of the Forest Plan in about 1995.

Watershed restoration needs on the Okanogan National Forest will normally involve maintenance of soil and water control structures in old timber sales or improperly restored roads, landings or timber harvest areas. Some stream channel clearing would be needed where logging slash was left in drainageways. A watershed restoration schedule is listed in Appendix F. The restoration schedule will be updated as new projects are discovered or older projects require maintenance.

Many streambeds on the forest are dry during the summer and fall. There is growing competition for water resources. The forest has untertaken an aggressive water rights filing program to insure water will be available for resource uses, such as range management and recreational campgrounds, now and in the future. The National Forest

System lands formally reserved under the Federal Organic Act of 1897 have reserved water rights for the purposes the lands were reserved --the production of timber and a continuous supply of water. These rights are recognized by the State of Washington and receive a priority use date of the actual reservation date of the land where the water is withdrawn and used. The forest is now current with water rights filing for its current uses. As the resources are developed and require water, applications for water rights will be filed with the Washington State Department of Ecology. These projects are not now known, but will likely be tied to range and recreation program developments.

The forest will work with water resource developers as they show interest in projects. Developers are most interested currently in small hydro-electric projects. There are no completed projects to administer, but there is potential for the completion of some plants. There are several diversions for irrigation and domestic purposes. Only one potential project, the proposed Early Winters Ski project, could withdraw substantial water in the future. A large mining operation could also use considerable water if the industry develops beyond its current condition. There is no proposed schedule for these projects as they are developed by the private sector in response to specific needs.

The forest will work with other agencies and organizations concerned with water resources draining the national forest. These may include soil and water conservation districts, Soil Conservation Service, city and county officials, water basin planning groups, Washington State Department of Ecology and the Colville Confederated Tribes or federal agencies. Coordination would be developed as needed.

### Lands Program

The goals of the land program include obtaining rights-of-way to provide access where needed; working toward acquiring rights-of-way and sharing in the construction cost of roads that serve National Forest, landowner, and other user needs; continue working with Okanogan County to transfer roads with substantial local use to County jurisdiction; and adjusting landownership by changing ownership through (1) purchases, (2) exchanges, and (3) donations with private landowners, State and local government agencies, and transfer with other Federal agencies.

Public and private lands in and around Okanogan National Forest will be classified to encourage the best land pattern the forest can seek. All lands will be classified according to the criteria set forth in the Forestwide Standards and Guidelines found in section three of this chapter.

Land acquisition and disposal decisions will be deferred until the needed studies have been completed.

## Minerals Program

The Forest Service's mineral program will continue to be largely reactive due to the very structure of the mineral disposal laws and regulations. Except for in-service saleable mineral contracts and permits, a major part of this job will be responding to applications and proposals submitted from outside the agency. Forest Service responsibility for such proposals lies mainly in providing reasonable surface protection and reclamation requirements within specified time frames and in assuring compliance of the same. The basic objective will be to facilitate minerals exploration and development on forest lands while accommodating the needs and conservation of other resources to the fullest extent possible.

It is anticipated that action will be necessary on an average of 170 mineral operating plans, lease applications, permits, etc., per year for the first decade. Actual numbers will be heavily dependent upon the economy and minerals demand. Average annual mineral production, including energy minerals, from forest lands during the first decade is estimated at $100,000. Actual production may vary substantially, however, because of the inherent difficulty in predicting mine developments.

Mineral examinations may be initiated by the forest to assess mineral values or valid rights in cases of suspected occupancy trespass, wilderness mining claim development, land exchange proposals and/or other administrative purposes. Technical examinations will also be necessary for any mining claim patent applications received involving forest lands.

As with the other resource areas, the monitoring actions will be an important part of the minerals program. The monitoring plan is designed to identify problems with the approval process and surface protection mitigation connected with mineral operations, and the effects of other forest projects on the minerals resource. It also monitors minerals development proposals and changes in critical minerals demand and availability which might trigger a modification or revision of the Forest Plan.

## Wilderness Program

The Pasayten and Lake Chelan-Sawtooth Wilderness areas will be managed to preserve the wilderness character of the areas, and administered to provide such uses consistent with the Wilderness Act of 1964 in a manner compatible with the preservation of wilderness.

Detailed management information is provided in the Standards and Guidelines section. Overall management actions will be aimed at reducing the presence and/or the impacts from human activities within wilderness. Examples of these actions are the decisions to remove the Remote Automated Weather Station, USGS Water Guaging Station in Andrews Creek, outfitter-guide base camps, and the determination that two administrative facilities (War Creek Cabin and Bighorn Cabin) are not needed for administrative purposes. In addition, necessary trail access will be reconstructed and unnecessary trails will be obliterated. Project work by Forest Service personnel will be guided by the principles implied by the questions "Is it required for management of the area as wilderness?" and if so, "Is it the minimum tool necessary to accomplish the job?".

An Implementation Schedule for each wilderness will be completed within one year of the date of approval of the Forest Plan (Final). This schedule will contain specific action items needed to follow Forest Plan direction, prioritization of action items, unit or individual responsibility, and target dates for completion.

The physical, social and managerial settings within wilderness will be monitored to assure that wilderness attributes are maintained above Region 6 guidelines. Degradation of key resources, utilizing the principles of "Limits of Acceptable Change" (i.e. the amount of human-caused change allowed in selected ecological and social factors within wilderness which would not result in loss of the wilderness character), will not be permitted.

An overall capacity for wilderness visitor use has been estimated. During the next decade, this capacity estimate will be reviewed and refined to enable the managers to be more geographically specific. Visitor use tends to concentrate in certain areas, and at some point capacity could be reached in localized areas, necessitating management action, while the overall area remains well below capacity.

Coordination will occur with the National Park Service, Washington Department of Game, and other agencies. The Implementation Schedule for the Lake Chelan-Sawtooth Wilderness will be carefully coordinated with the Wenatchee National Forest to assure that the wilderness is managed as a whole, and not two administrative parts. Coordination will occur with other agencies on a case-by-case basis. The Skagit Environmental Endowment Commission will be an important coordination need within that part of the Pasayten Wilderness drained by the Skagit River.

For a listing of specific wilderness projects, refer to Appendix B. When Implementation Schedules are completed, they will be incorporated into this Appendix.

**Recreation Program**

Portions of the Sawtooth, Liberty Bell (both inside and outside the North Cascades Scenic Highway), Tiffany and Mt. Bonaparte roadless areas will be managed to provide high quality semi-primitive non-motorized and semi-primitive motorized recreation opportunities. The primary management activities in these areas over the next decade will be maintaining and reconstructing necessary trails, limited construction of new trails and installation and maintenance of facilities necessary for resource protection or to maintain or enhance recreation opportunities. Outfitter-guide operations necessary to take advantage of recreation opportunities in these areas will be encouraged.

Selected scenic viewsheds (both inside and outside the North Cascades Scenic Highway) will be managed to provide high quality roaded natural recreation opportunities by maintaining high to moderate visual quality levels. The primary management activity in these areas over the next decade will be to coordinate with other resource programs (particularly the timber sale program) to assure that adopted visual quality levels are maintained. In addition, viewshed corridor plans will be prepared in order to better schedule management activities to meet viewshed objectives. Facilities necessary for resource protection will be installed and maintained.

Developed sites will be provided where opportunities for meaningful recreation experiences are present. Forest Service developed sites which will receive emphasis over the next decade are fee campgrounds Forest-wide, and trailheads and developed sites within the North Cascades Scenic Highway. The primary management activities in these sites will be to upgrade facilities to the appropriate site development level and standard, complete vegetative management plans, and to manage the road system to manage use. Additional fee site opportunities and opportunities to utilize the private sector to reduce operation and maintenance costs will be explored.

Developed sites operated by the private sector which will receive emphasis over the next decade are the proposed Early Winters Ski Area, Loup Loup Ski Area and organization sites. The primary activity at these sites will be to coordinate development and upgrading of facilities as per approved site development plans.

Cross-country skiing, snowmobiling and other winter sports opportunities will be provided by coordinating with the Methow Valley Ski Touring Association, Okanogan Valley Nordic Ski Association, Okanogan County Snowmobile Advisory Board and encouraging outfitter-guides to provide services in areas where these activities are compatible with other resource objectives.

Cultural resource management activities over the next decade will emphasize completion of a predictive modeling strategy to improve the ability to locate prehistoric cultural resources in a cost effective manner. In addition, cultural resource inventories will continue on those areas where ground disturbing activities are planned in order to discover all reasonably locatable cultural resources. Emphasis will be placed on those areas which will be impacted by road construction and timber harvest. Increased emphasis will be placed on evaluating cultural resources which may be affected by project activities or those which are concentrating people and resulting in damage to soil and vegetation in the area.

The Methow River will be studied to determine its suitability for inclusion in the Wild and Scenic River system.

The physical, social and managerial setting in recreation management emphasis areas will be monitored to assure that recreation attributes that facilitate the desired opportunity class are being protected. Sample field contacts will be made with visitors to identify their needs and expectations. An overall capacity for visitor use has been estimated. During the next decade, this capacity estimate will be reviewed, and refined to enable the managers to be more geographically specific. Off-road vehicle use will be monitored to assure that significant resource damage and/or conflicts with non-motorized users do not occur.

Coordination will occur with the National Park Service, Washington Department of Game, State Parks and Recreation, Skagit Environmental Endowment Commission, Colville Condederated Tribes, State Historic Preservation Office, Advisory Council on Historic Preservation and other agencies to assure that recreation activities are compatible with the plans and policies of these agencies.

For a listing of specific recreation projects, refer to Appendix A.

**Wildlife Program**

Primary emphasis is coordination with other resources, especially timber, road, recreation and range management, in order to improve or maintain habitat for wildlife. Specific direction is summarized in the Forestwide Standards and Guidelines and in the Management Strategies. In general, the wildlife management strategies will design and optimize habitat conditions for wildlife indicator species and other represented wildlife. Other management strategies and the Forestwide Standards and Guidelines will assure that at least minimum acceptable habitat conditions are provided. Proper implementation of all strategies, standards and guidelines is the most important aspect to providing for the needs of wildlife.

Habitat improvement projects to benefit wildlife are scheduled and listed in the appendices. These projects are important, but small in relation to the extent and effects of timber, road, recreation and range management activities. Several projects are dependent upon new surveys and inventories to better define how and where to apply needed habitat improvement. Examples include mountain goat and fisheries projects where site specific surveys are needed first.

Monitoring is a major part of implementing the Forest Plan. Details of the monitoring actions are in Chapter Five. Evaluation of estimated outputs in the DEIS and expected conditions in standards, guidelines and strategies will determine if wildlife habitat and population trends are as intended, and form the basis for changing Plan direction if necessary.

Inventories and data gathering will be carried out to update existing information. A list of needs is found in the end of Chapter Two of this plan. Habitats will be measured more accurately, changes in amount will be apparent (for monitoring of both activities and natural processes), and conditions will be ascertained. This is important given wildlife dependence on key habitats which are in limited amounts in many locales. Specifically, habitat set aside for spotted owls will be managed for this sensitive species until the status of its occurrence has been ascertained through inventory. Then spotted owl management or habitat areas will be provided as appropriate (either as is, more or less). If spotted owls normally range on the Okanogan National Forest, then research is needed to settle the question of whether westside habitat requirements are appropriate for east-side environments.

However, state-or-art information (MMRs) will be used until revisions are completed.

## Fire Protection and Use Program

The fire management program on the Okanogan National Forest is a service program which supports the other resource management programs identified in the Forest's Proposed Land and Resource Management Plan. Fire management includes all activities for the protection of resources and other values from wildfire, and the use of prescribed fire, to meet land and resource management goals and objectives.

The fire protection program includes the activities of fire prevention, presuppression management (re. planning, detection, dispatching, fire danger rating, fire weather forecasting and training), suppression, fire reporting, and fire management analysis and planning. The collective application of all fire management activities required to meet the fire management direction for each management area, including fuels management, will be documented in the Fire Management Action Plan as an appendix of the Forest's Proposed Plan. The Fire Management Action Plan will be completed within one year after approval of the Proposed Plan.

Fire management direction identifies an appropriate suppression response (i.e. Confinement, Containment and Control) for each management area based on the cost of suppression compared against the expected resource loss.

Fuels management involves the planning, contracting, administration and direct implementation of prescribed fire and other fuel treatment activities for the protection, maintenance and enhancement of resource productivity. All fuel treatment activities are based on other resource needs, especially the harvesting of timber.

The overall goal of fire management is to minimize the sum of the fire protection and fuels treatment program costs, plus the net change due to a wildfire or proposed application of fuel treatment project, based on the value of planned resource outputs, all of which is consistent with land and resource management goals and objectives. Fire management's role is to coordinate, plan and implement fire protection and fire use programs consistent with the Forest's Proposed Plan and the management area prescriptions.

Implementation of fire management programs also involves both internal and external coordination. The internal coordination, with other resource programs, is principally accomplished through the forest's timber sale program. Additional internal coordination is required for the planning and implementation of prescribed fire activities in support of wildlife, range and silvicultural plans and objectives. The annual fuel treatment program varies based on the timber harvest levels of the preceeding years and the availability of other resource funding for the prescribed fire applications.

The majority of the external coordination involves reciprocal cooperative fire protection agreements with the forest's neighboring fire suppression organizations. The Okanogan National Forest has formally entered into agreements with State of Washington, Department of Natural Resources; Bureau of Indian Affairs, Colville Confederated Tribes; Department of Interior, North Cascades National Park and the Province of British Columbia, British Columbia Forest Service. The forest also contractually protects adjacent lands administered by the Department of Interior, Bureau of Land Management.

The use of prescribed fire and fire suppression activities have a direct effect on the physical and biological environment, which includes air quality. Monitoring the effects of the fire management programs will help determine if management practices are changing the physical and biological environment and if the cost of the program activities meet the Cost plus Net Value Change criteria associated with the implementation of the forest's fire protection and fire use programs (see Monitoring Plan).

### Air Quality Program

The effects of the forest's prescribed burning program on localized air quality will be monitored based on the production of Total Suspended Particulates (TSP) emissions. The level of TSP emissions produced will be calculated annually (see Monitoring Plan) by recording the fuel moisture, time of year and total tons of available fuel at the time of burning. The overall objective of the fuels treatment program is to minimize the level of prescribed fire use and to concentrate on utilization as the primary method for meeting fuel management objectives. In most instances on-site burning of wood residues should be a last resort fuel treatment method. The forest will attempt to make reasonable progress in reducing its total TSP emission production.

### Range Management Program

Grazing will remain an important use on the Okanogan National Forest. An estimated 652 thousand AUMs will be available during the Plan period (next 10 years). The exact amount will be a function of the AMPs to determine.

Coordination in short range and long range planning between grazing livestock use and other resource management is the primary program focus. Use of coordinated resource management will help accomplish this within the service and with integrating lands of all ownerships under a single unit management plan where possible. Management plans and updating of them will be accomplished at a rate of two per year following re-analysis of allotments in order of priority. A tentative priority listing can be found in Appendix D.

Monitoring of actions prescribed in allotment management plans is an important part of administering forest rangelands. The monitoring plan found in Chapter Five describes what actions will be monitored.

Range projects, other than administrative planning, will be accomplished in cooperation with the permittee.

## Facilities Program

The Okanogan National Forest transportation system is planned, constructed and operated to facilitate land and resource management objectives. Coordination with the objectives of wildlife, timber, range and recreation is essential in establishing transportation system program objectives. Specific direction for transportation system planning, construction and operation is summarized in the Forestwide Standards and Guidelines and in the Management Strategies.

New road construction will be primarily (almost entirely) for timber harvest operations and limited to local roads. The arterial and collector roads are in place, but concurrent use by commercial trucks and other types of vehicular traffic is not safe or economically practical on some of these roads. Those arterials and collectors at the lowest standards, or with the highest demand for concurrent use by commercial trucks and other traffic types may require reconstruction to a higher standard. These major activities are listed in Appendix G. Reconstruction will be required on some local roads for safety or economy of operations.

Monitoring of the Forest Plan for roads will generally be accomplished through maintenance of the Forest Development Transportation Plan. The Forest Development Transportation Plan consists of the Primary Base Series Map (scale 1:24000), Transportation Inventory System (TIS) and the Forest Travel Plan. (The details of monitoring are in Chapter 5). The Forest Travel Plan will also be used to implement many of the requirements in the standards and guidelines and management prescriptions.

Two transportation and utility corridors have been designated on the National Forest. These are located along State Highway 20 and include seven miles at Loup Loup Pass and two miles at Wauconda Pass. No additional needs for transportation or utility corridors had been identified until June, 1985. At that time, the Bonneville Power Administration identified another possible corridor that could cross the Okanogan National Forest along Forest Road No. 4150 for 9 miles. An alternative to the corridor along Road No. 4150 would be an additional powerline in the corridor along State Highway 20 at Loup Loup Pass.

### b. Objectives

Table 4.1 summarizes projected resource outputs, environmental effects, activities and costs. Many of the outputs are targets or objectives of this proposed plan.

TABLE 4.1

SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS,
ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | | (Average Annual Units) | | |
| Developed Recreation Use (1000 RVDs) | 622 | 876 | 925 | 980 | 1042 |
| Non-Wilderness Dispersed Recreation Use (1000 RVDs (includes WFUDS) | | | | | |
| Roaded | 400 | 486 | 577 | 644 | 719 |
| Unroaded | 100 | 122 | 102 | 114 | 127 |
| Wilderness Use (1000 RVDs) | 61 | 73 | 82 | 92 | 102 |
| Trail Construction/ Reconstruction (Miles) | 30 | 30 | 30 | 30 | 30 |
| Developed Site Construction/ Reconstruction (PAOT) | 20 | 20 | 20 | 20 | 20 |
| Visual Quality Objectives (1000 acres) | | | | | |
| Preservation VQO | 626 | 626 | 626 | 626 | 626 |
| Retention VQO | 329 | 329 | 329 | 329 | 329 |
| Partial Retention VQO | 56 | 56 | 56 | 56 | 56 |
| Modification VQO | 584 | 584 | 584 | 584 | 584 |
| Maximum Modification | 111 | 111 | 111 | 111 | 111 |
| Unroaded Areas Assigned to Unroaded Management Prescriptions (M Acres) | 206.5 | 206.5 | 206.5 | 206.5 | 206.5 |
| Anadromous Fish Estimated Harvest/ Habitat Capability for Harvest (1000 Pounds) | 3.6/11.1 | 3.6/11.1 | 3.6/11.1 | 3.6/11.1 | 3.6/11.1 |
| Anadromous Fish Habitat Improvement (1000 Pounds of Fish) | 0 | 0 | 0 | 0 | 0 |

TABLE 4.1

## SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS, ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | | (Average Annual Units) | | |
| Management Indicator Species (Habitat Capability) | | | | | |
| Deer - Mule and White-tailed Winter Range/Forestwide (1000 animals) | 15.5/35 | 15.5/35 | 15.5/35 | 17.4/33 | 17.4/33 |
| Old Growth Mature Wildlife Forestwide (pairs) | 3240 | 3010 | 2840 | 2730 | 2570 |
| Primary Cavity Excavators Outside Wilderness/Forestwide % of Max. Potential Woodpecker Pops. | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Fish - Anadromous and Resident Trout - Forestwide (1000 smolts & 6" trout) | 415 | 415 | 415 | 415 | 415 |
| Lynx - Forestwide (animals) | 63 | 93 | 95 | 95 | 95 |
| Ruffed Grouse - Forestwide (pairs) | 920 | 935 | 950 | 960 | 975 |
| Wildlife Habitat Improvement (1000-Acre Equivalents) | 2.4 | 2.1 | 2.0 | 1.8 | 1.7 |
| Range - Permitted Grazing (1000 AUMs) | 65.7 | 68.9 | 67.3 | 64.0 | 61.3 |
| Improved Range Allotments (Percent) | 10 | 19 | 17 | 12 | 9 |
| Structural Improvements/Fences (Miles) | 31 | 38 | 34 | 30 | 27 |
| Structural Improvements/Water Developments (Number) | 25 | 30 | 28 | 25 | 21 |
| Non-structural Improvements (Acres) | 493 | 591 | 540 | 460 | 422 |

TABLE 4.1

SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS,
ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | | (Average Annual Units) | | |
| Allowable Sale Quantity 1/ (Million Board Feet) | 79.8 | 61.9 | 54.5 | 54.5 | 54.5 |
| Mixed Conifer | 62.1 | | | | |
| Lodgepole Pine | 17.7 | | | | |
| SSC | 0 | | | | |
| Allowable Sale Quantity (Million Cubic Feet) | | | | | |
| Mixed Conifer | 11.9 | 8.6 | 8.1 | 8.1 | 8.1 |
| Lodgepole Pine | 3.6 | 3.5 | 2.5 | 2.5 | 2.5 |
| SSC | 0 | 0.4 | 0.4 | 0.4 | 0.4 |
| Fuel Wood (1000 Cubic Feet) | 1031 | 856 | 637 | 333 | 327 |
| Reforestation 2/ (1000 Acres) | 7.7 | 6.4 | 4.8 | 3.8 | 4.2 |
| Timber Stand Improvement (1000 Acres) | 3.2 | 3.5 | 7.1 | 6.4 | 4.8 |
| Timber Growth in Year 2030 (Million CF) | 9.5 | 6.0 | 3.6 | 2.6 | 6.9 |
| Water Yield (1000 AF) | 2315 | 2315 | 2315 | 2315 | 2315 |
| Sediment (Tons/Year Index) | 326 | 328 | 334 | 344 | 351 |
| Improved Watershed Condition (Acres) | 0 | 0 | 0 | 0 | 0 |
| Minerals-Operating Plans 3/ | 170 | 230 | 245 | 260 | 280 |

1/ First decade harvest in millions of board feet from FORPLAN solution. Board foot harvest for subsequent decades calculated from FORPLAN estimates of cubic foot volumes using board foot to cubic foot conversion ratio of 4.95 from Table G-1, Regional Guide for the Pacific Northwest Region.

2/ Acres of reforestation including those areas where natural regeneration will occur following scarification by timber sale operators during logging and subsequent slash disposal.

3/ Includes operating plans, Notices of Intent, prospecting permits, material sales, free-use permits and leases involving locatable, leasable and saleable minerals.

TABLE 4.1

## SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS, ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | | (Average Annual Units) | | |
| Minerals Produced 4/ (Million $) | .10 | .57 | 1.25 | 2.15 | 3.25 |
| Arterial and Collector Road Construction/Reconstruction (Miles) | 7.2 | 3.5 | 0 | 0 | 0 |
| Timber Purchaser Road Construction/Reconstruction (Miles) | 57.7 | 44.1 | 46.5 | 29.5 | 37.2 |
| Roads Suitable for Public Use (Miles) | | | | | |
| Passenger Car 5/ (Miles) | 988 | 988 | 988 | 988 | 988 |
| High Clearance Vehicle Only (Miles) | 944 | 876 | 888 | 803 | 841 |
| Fuel Treatment (1000 Acres) | 7.4 | 11.8 | 9.6 | 7.9 | 7.4 |
| Operational Costs (Million $) | 6.5 | 6.0 | 5.9 | 5.8 | 5.8 |
| Capital Investment Costs (Million $) | 5.6 | 5.4 | 3.7 | 1.7 | .7 |
| Total - National Forest System | | | | | |
| Allocated 6/ (Million $) | .1 | .1 | .1 | .1 | .1 |
| Appropriated 7/ (Million $) | 12.0 | 11.3 | 9.5 | 7.4 | 6.3 |

4/ The values offered here are relative values based upon minerals accessibility and are not intended to be an accurate estimate of mineral production.

5/ The days available for public use would vary even though the miles do not.

6/ Funds from other agencies.

7/ All other funds.

TABLE 4.1

## SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS, ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1 1986-1990 | DECADE 2 1991-2000 | DECADE 3 2001-2010 | DECADE 4 2011-2020 | DECADE 5 2021-2030 |
|---|---|---|---|---|---|
| | | | (Average Annual Units) | | |
| Returns to Government (Million $) | 4.7 | 3.8 | 3.4 | 3.4 | 3.4 |
| Human Resource Program (Person Years) | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 |
| Potential Changes in Jobs 8/ (Change in Number) | 72 | | | | |
| Changes in Income (Change in Total $) (Million $) | .8 | | | | |
| Payments to Counties (Million $) | 1.2 | 1.0 | .8 | .8 | .8 |

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8/ Includes primary employment and secondary employment.

TABLE 4.1

## SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS, ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | |
|---|---|
| Area Available for Specific Resources Uses 9/ | |
| Timber Harvest (Thousand Acres) | 812.3 |
| Grazing (Thousand Acres) | 951.4 |
| Mineral Exploration 10/ (Thousand Acres) | 1065 |
| Acreages of Available Timber Harvest Prescriptions | |
| Clearcut 11/ (Acres) | 541.3 |
| Shelterwood 11/ (Acres) | 541.3 |
| Selective Cut 12/ (Acres) | 88.1 |
| Lands Tentatively Suitable for Timber Production (Acres) | 701.2 |
| Lands Suitable for Timber Production (Acres) | 568.4 |

9/ Area available for specific resource prescriptions includes both acres suitable for specific resource management, and unsuitable inclusions which will be crossed in order to access suitable lands.

10/ Lands not withdrawn from mineral entry.

11/ Clearcut or shelterwood harvest systems may be applied subject to specific resource objectives and management opportunities identified by IDT during project planning.

12/ Applied to low productive lands classified as a Separate Suitability Component, and to lands capable of producing 20 cubic feet per acre CMAI on a site specific basis in accordance with Management Area prescriptions.

TABLE 4.1

SUMMARY OF PROJECTED RESOURCE OUTPUTS, ENVIRONMENTAL EFFECTS, ACTIVITIES, AND COSTS FOR THE PROPOSED ACTION

| OUTPUTS AND EFFECTS (Units of Measure) | DECADE 1-5 1986-2030 | |
|---|---|---|
| | (Average Annual Units) | |
| Lands with Timber Yield Reductions (Acres) | | |
| Full Yield | 361.4 | |
| 50% - 99% of Full Yield | 250.1 | |
| 1% - 49% of Full Yield | 17.9 | |
| No Yield | 73.8 | |
| Long-Term Sustained Yield Capacity (Million CF) | 20.0 | } average annual |

# FORESTWIDE STANDARDS AND GUIDELINES

The following is a list of standards and guidelines that apply forestwide:

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Cultural Resource Overview | Maintain a forestwide cultural resources overview that summarizes and compiles known cultural resources information. |
| Cultural Resource Inventory | Inventory all acres where ground disturbing activities are planned in order to discover all reasonably locatable cultural resources.<br>Develop and maintain a sytem for accounting for inventoried acres. |
| Cultural Resource Evaluation | Evaluate cultural resources that may be affected by project activities. Evaluate against the criteria for eligibility to the National Register of Historic Places. Develop a schedule to evaluate all other cultural resources by theme group, agreements, or other cost effective means as forestwide inventory nears completion. |
| Cultural Resource Nomination | Nominate cultural resources that meet the appropriate criteria to the National Register of Historic Places. Nominations shall be scheduled incidentally until completion of the forestwide inventory of cultural resources. |
| Cultural Resource Protection | Protect eligible cultural resources from management activities by making reasonable efforts to avoid adverse impacts to the resources or develop a procedure to conserve the values through proper scientific methods or study. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Protect eligible cultural resources from vandalism and natural destruction. Protection plans may include physical protection such as fences and barriers, scientific study and collection, patrol and site monitoring, proper use or removal of signs, maintaining site anonymity, and gaining public understanding and support through education.<br>Non-eligible structures shall be allowed to deteriorate through natural processes unless they are considered unsafe or their presence encourages other resource damage, in which case they shall be removed. |
| Cultural Resource Maintenance | Decisions on the maintenance level for eligible historic structures shall be based on an analysis of utility, interpretive value, public interest, existing site or area allocation, funding sources, existing agreements, etc.<br>Eligible historic sites shall be maintained or the resultant adverse effect shall be mitigated to the extent practicable. |
| Cultural Resource Enhancement | Provide for the interpretation of cultural resources for educational purposes to the extent consistent with protection, public interest, and management requirements. Displays, interpretive trails, video and audio recordings, brochures, tours and signing, etc., are appropriate interpretive means. |
| Cultural Resource Coordination | Coordinate the long-term management of cultural resources with the State Cultural Resource Plan and other agencies as necessary.<br>Coordinate with the Colville Confederated Tribes regarding cultural resources of suspected prehistoric origin. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Information about planned project activities shall be presented to Colville Confederated Tribes for coordination about effects to traditional religious sites. |
| Use Administration | Cross-country ski trails and snowmobiling should not be permitted in areas of concentrated wildlife use, except where designated open.<br>All recreation special use permits shall be reviewed yearly.<br>Recreation special use permits shall conform with the emphasis of the management area.<br>Give priority to permits needed to provide public service.<br>Grant new special use permits only when:<br>(1) use is compatible with planning direction for National Forest land.<br>(2) National Forest resources and programs shall not be damaged or impaired.<br>(3) National Forest land is the most logical place for the use. |
| Trail Reconstruction, Construction, Maintenance and Operation | Outside recreation management emphasis areas, construct, reconstruct and maintain only those trails needed as access to congressionally designated areas, recreation management emphasis areas, or special recreation attractions.<br>Seasonal trail closure may be used for safety, resource protection or administrative control of the trail network. |

ACTIVITY : STANDARDS AND GUIDELINES

FISH AND WILDLIFE

Wildlife Surveys, Planning, Prescriptions, Monitoring Cooperation and Administration

Manage for cover unit sizes and other characteristics described in the Okanogan National Forest Timber/Deer Coordination (Report on Task I) memo of October 25, 1983 (see Appendix F of the EIS). This direction may be updated periodically to respond to new information. The newest direction shall be followed. (1)

Recognize the established rights of the Colville Confederated Tribes' members to hunt on the North Half.

Within each township, 5 percent of the suitable acres producing greater than 20 cubic feet per acre per year in mixed conifer and lodgepole stands shall be retained in an old growth condition, where presently available and biologically possible. Replacement old growth shall be managed to provide 5 percent old growth per township in the future. (2)

Minimum management requirements for species dependent on old growth or mature shall be provided according to Regional Guidelines (2/9/83). (3) The species are:

| Species | Outside Classified Areas Min. # Areas to Maintain Viable Populations |
|---|---|
| Spotted Owl | 9 |
| Barred Owl | 19 |
| Pileated Woodpecker | 52 |
| Marten | 106 |
| 3-Toed Woodpecker | 174 |

The 5 percent old growth per township is generally included in the minimum management requirements; however, where dispersion dictates placement of specific minimum management requirements, the 5 percent old growth may be in addition to minimum management requirements.

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(1) Only with Alternatives B, C, F, G, G-departure, H and I.
(2) Only with Alternatives B, F, G and G-departure.
(3) With all alternatives except A.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Where practical, implement area road closures on new roads during the hunting season. Evaluate existing roads for area road closures during hunting season. |
| | Leave as many snags and culls as practical following management activities. |
| | In lodgepole pine stands, future cavity nestor habitat shall be provided for by deferring regeneration entries into 5 percent of the stands for 1/3 of the rotation. Stands selected for deferred entry shall not be selected during the first decade. |
| | Where natural openings of at least 5 acres in size occur, no more than 25% of the perimeters should be created openings. |
| | Meet the cover needs for other wildlife by providing the cover standards for mule deer, old-growth, minimum management requirements and lynx habitat. |
| | Manage riparian vegetation specifically for wildlife, subject to water quality standards, except in Management Area 5. (1) |
| | Manage disturbing activities during critical periods (e.g. nesting, lambing, fawning and kidding seasons) to protect wildlife. |
| | Maintain between 6 to 9 clumps of large, thickly branched trees per linear mile on ridges that are used by wintering blue grouse. Clumps shall contain 4 to 16 trees. |
| | Protect raptor nest sites from destruction during nesting and minimize disturbance during nesting. Destruction of nest site trees that are not being used for nesting shall be decided on a case-by-case basis. |

(1) Alternatives C, G, G-departure, H and I.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Drainages containing aspen shall be managed to perpetuate aspen as a stand component during early conifer seral stages (all conifer seral stages should be represented in each major drainage). Aspen shall be perpetuated in associations where it is the climax forest community. Discourage grazing of regenerated aspen clones for at least two growing seasons. |
| | Threatened and endangered species shall be managed according to recovery plans. Coordinate management with U.S. Fish and Wildlife Service and the Washington State Departments of Fisheries and Game. |
| | Natural debris and trees needed for a future supply of natural debris shall be maintained and managed to: (1) maintain stream channel and bank structure sufficiently to maintain water quality in SMU Class I and II streams at existing levels, and (2) maintain fish habitat at existing levels. |
| | Maintain vegetation on streambanks that is needed to provide cover and/or root strength, so as to maintain streambank stability and fish habitat capability at existing levels. |
| | Fish passage up and down streams should be unobstructed. |
| | Sensitive plants shall be protected. |
| Non-structural and Structural Habitat Improvements | Structural and non-structural improvements shall conform with the resource emphasis of the management area. |
| Strutural Habitat Maintenance | Maintenance of existing structures shall conform with the resource emphasis of the management area. |
| RANGE | |
| Range Planning | Update range allotment management plans as needed. Coordinate with other resources. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Range Non-structural and Structural Improvements and Maintenance | Range structural and non-structural improvements and maintenance shall conform with the resource emphasis of the management area. |
| Noxious Weeds | Control noxious weeds to the extent practical. The following methods for control shall be used: mechanical, biological, access restrictions to prevent spread, seeding disturbed soils and use of herbicides.<br>Small infestations of new noxious weeds (e.g. tansy ragwort, musk and scotch thistle) should be eradicated as quickly as possible. |
| WATER, SOIL AND AIR | |
| Inventory | Inventory potential soil and water rehabilitation sites that are identified during project scoping. |
| Planning | Water quality shall meet or be better than State water quality standards. All activities shall meet the Region Six Streamside Management Unit policy goals.<br>Temperatures shall not be increased on SMU Class I streams. Temperature increases on SMU Class II (and fish bearing SMU Class III) streams shall be limited to the quantitative criteria in State Standards. Temperatures on SMU Class III and IV streams shall shall not deteriorate water quality below the water quality goals for downstream SMU Class I and II (and fish bearing SMU Class III) streams. Exceptions must be based on scientific rationale, fully maintain existing beneficial uses of the water, and be approved through an Environmental Assessment. |
| Improvements | Improvements of the water resource should conform with the resource emphasis of the management area. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Rehabilitate soil productivity, water quality and land following minerals development and extractions to meet the goals of the management area. |
| Administration and Management | The forest shall comply with the State of Washington Smoke Management Plan.<br>The forest should follow the direction established by the State of Washington Implementation Plan (Visability Protection Program).<br>Locate landings to avoid crossing drainages with skid trails. Trees should not be dropped into or across streams. Disturbance of the streambank should be kept to a minimum. Remove unanchored tops and branches from designated streams.<br>Tractor logging is often favored over other yarding systems whenever possible. Past experience on the Okanogan suggest these guidelines for tractor logging:<br>- Tractor logging should be restricted to slopes where past experience has shown adverse site disturbance will not occur. As a general guideline, under the most favorable condition, a 45 percent slope is considered the maximum for tractor logging, although 35 percent is more usual. However, in some situations, tractor logging on steeper slopes is acceptable. These situations have deep, well drained, medium textured soils and are north and east aspects which favor rapid revegetation. These sites normally need to be waterbarred, seeded and fertilized right after use.<br>- Restriction of tractor use should be considered immediately after rains or when the ground is soft and/or muddy. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | - Downhill tractor logging should be closely monitored to minimize erosion. Distribute tractor roads so water is not concentrated. Before a tractor road becomes so channelized that it cannot be properly waterbarred, retire it. |
|  | - Skid trails should be located where they can be drained. On steep slopes, skid trails that run straight up the hill create difficult drainage situations. Instead, skid trails should be quartered or angled down the slope for easy drainage. Undulate or break the grade and avoid long sustained grades. Break the grade as close to about every 150-250 feet as is possible. Do not normally permit tractor road gradients over 30 percent. At these gradients, it is difficult to properly install waterbars with a tractor, and control of the tractor while descending without lowering the blade becomes difficult. Hand constructed waterbars are usually necessary on slopes over 30 percent. |
|  | - Avoid skidding through perennial streams. When skidding across intermittent drainages, skid trails should dip down, across and come out of the stream at right angles to prevent diverting the stream down the skid trail. |
|  | Management activities should be conducted to prevent deterioration of site quality. Soil protection should be within the standards for soil protection in FSM 2520, Region Six Supplement No. 45. Slight modifications of these criteria can be made to fit conditions of the forest. The soil resource should ensure that the necessary water is available for management needs such as road construction and maintenance, when practical. |
| Rights/Use Management | Water use rights should be obtained from the Washington State Department of Ecology when water is needed for recreation and range and livestock use. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Where diversion, point of use and water transmission lines are located on National Forest lands, special use permits shall be issued to conform with the goals of the management area. |
| Resource Improvement Maintenance | Maintenance of watershed improvements should conform with the resource emphasis of the management area. |
| MINERALS AND GEOLOGY |  |
| Processing Exploration and Site Specific Development Proposals, Processing Lease Applications | Provide reasonable access to all National Forest system land not withdrawn as per U.S. Mining Laws of 1872 (as amended).<br>Minerals exploration proposals shall conform with the surface resource emphasis of the management area, while meeting all existing laws and regulations.<br>Mineral development proposals shall be required to go through a separate environmental analysis process. |
| Reserved and Outstanding Rights | All Forest Service projects shall include reasonable measures to protect valid existing rights and improvements of mineral claimants, leasees and permittees.<br>All existing mineral withdrawals shall be reviewed as to current need by 1991 as per Section 204(1) FLPMA (90 Stat. 2754). |
| LANDS |  |
| Special Use Management (Non-recreation) | Special use permits shall conform with the emphasis of the management area.<br>Give priority to permits needed to protect public health and safety, provide public service, or provide access to private lands. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Grant new permits only where:<br>(1) use is compatible with planning direction for National Forest land.<br>(2) National Forest resources and programs shall not be damaged or impaired.<br>(3) Private land is not available to acomodate the use.<br>(4) National Forest land is the most logical place for the use.<br>(5) Private land rights would be significantly infringed upon without a permit, such as when private land use is contingent upon the permit.<br>Electronic uses shall be restricted to designated sites and shall have approved site plans. |
| Right-of-Way Grants | Rights-of-way shall conform with the emphasis of the management area. |
| Federal Energy Regulatory Commission License and Permits | Special use permits and Section 4E requirements provided to FERC for inclusion in their licenses and permits shall conform with the emphasis of the management area.<br>Water development proposals shall be required to go through a separate environmental analysis process. |
| Withdrawals, Modifications and Revocations | Recommend to the Department of Interior that all tree improvement seed orchards and evaluation plantations be withdrawn from mineral entry. |
| Property Boundary and Corner Location and Maintenance | Priority shall be given to establish the forest boundary accurately where adjacent uses are potentially incompatible with the management area resource emphasis.<br>Protect all survey monuments and markers. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Rights-of-Way Acquisition and Cost-Share Agreements | Obtain rights-of-way to provide access where needed.<br>Work toward acquiring rights-of-way and sharing in the construction cost of roads that serve National Forest, landowner and other user needs.<br>Continue working with Okanogan County to transfer roads with substantial local use to County jurisdiction. |
| Landownership Adjustment | Adjust landownership by changing ownership through (1) purchases, (2) exchanges, and (3) donations with private landowners, State and local government agencies, and transfer with other Federal agencies.<br>Public and private lands in and around the Okanogan National Forest will be classified to encourage the best land pattern the forest can seek. All lands will be placed in one of the following groups:<br>Group I. These lands where Congress has either directly or indirectly instructed the Forest Service to retain ownership and acquire nonfederal lands for a designated purpose. (Creation of a wilderness is an example of the indirect approach.)<br>In most situations the objective is to retain existing ownership and acquire remaining land. Acquisition of less than fee title will be considered if land management objectives can be met in that way.<br>Group II. These are lands needed for a special type of management and allocated for that purpose. These land-use allocations include, but are not limited to, unroaded areas, recreation, visual, soils, watershed, wildlife, range and timber.<br>In most situations the objective is to retain National Forest ownership and acquire private land. |

ACTIVITY : STANDARDS AND GUIDELINES

Acquisition of less than fee title will be considered if land management planning objectives can be met in this way.

Group III. These are general National Forest lands and are divided into four subgroups:

III-A - Consolidated areas of National Forest lands that are generally solid blocks. The contiguous blocks will not normally be breached (creating a gap destroys the consolidated character) for land adjustment unless the area is designated as a retraction area.

III-B - This includes land identified as being deer winter range or migration routes. The integrity of these lands will be maintained through ownership by public agencies or, in the Methow Review District, protection through county zoning regulations. National Forest lands may be retained or exchanged to other entities that would provide for continuation of those migration routes and winter ranges.

III-C - This includes areas of mixed private and Federal ownership. The objective is to rearrange ownership patterns to benefit commodity production goals for public and private lands and to utilize National Forest lands to acquire high priority lands for National Forest use.

III-D - These are isolated parcels that can best be managed by the Forest Service or some other public agency. A parcel may be transferred or exchanged to another public agency.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Group IV. These lands include small isolated tracts of National Forest land situated away from contiguous blocks of National Forest land and private lands that are managed for intensive uses such as agriculture, residential subdivision, industrial development, ditch lines, State and County highways, etc.<br>Federal lands in this group will normally be made available for disposal in land exchanges to acquire land in Groups I, II or III.<br>Private lands in this group are generally not available and will normally not be acquired by the Forest Service.<br>Group V. These are lands which need more intensive study and planning before landownership decisions can be made.<br>Land acquisition and disposal decisions will be deferred until the needed studies have been completed. |
| FACILITIES | |
| Transportation System Planning, Construction, Operation and Maintenance | Minimum road standards from FSM 7700 shall be met. Transportation plans shall consider the needs of future entries.<br>Operations on forest roads shall be prohibited or eliminated when necessary to protect the transportation facility or soil and water resources.<br>Motorized traffic shall be eliminated or prohibited within 1/4 mile of goat management areas, except where designated open. Where practicable, no new roads should be constructed.<br>4-wheeled motorized vehicles shall be eliminated or prohibited within 1/4 mile of old growth management areas, except where designated open. Where practicable, no new roads should be constructed. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Fish passage up and down streams should be unobstructed. |
| PROTECTION |  |
| Fire Suppression Strategy | The suppression of wildfires should be accomplished at minimum cost, consistent with the land and resource management goals and objectives and the fire management direction of the resource management area.<br>Wildfires shall not be used to accomplish land and resource management objectives, unless the Forest Plan specifically identifies the use of wildfire (e.g. unplanned ignitions) as a management tool by management area. |
| Fuel Management Inventory and Fuels Treatment | An analysis shall be made to determine the desired fuel profile and the required level of fuel treatment necessary to achieve that profile when: (1) management activities create a fuel profile greater than that existing prior to the activity, or (2) where natural fuel accumulations create a fuel profile that poses an impediment to current or future protection and management. Treatment options selected as a result of this analysis may include no treatment, partial abatement, total abatement of created and/or natural fuels and other actions that will reduce risk and/or hazard to acceptable levels.<br>Uncharred, woody debris shall be left on the forest floor for wildlife habitat, soil fertility and, where necessary, for microsite protection and for seed. For wildlife, this minimum amount of woody debris should include 640 sound, down logs (20 feet long) per 320 acres. Most of these logs should be uncharred. This minimum should also include 80 unburned slash accumulations or piles (10' x 10') per 320 acres. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Maintenance of air quality should be a key factor in planning prescribed fire use. Consideration should be given to mitigation measures, such as burning during spring to reduce the level of emissions, burning earlier and later in the year to spread emissions throughout the year, avoiding burning near high recreation use areas during peak times of use, and emphasizing utilization of the heavier fuels within prescribed burning project sites.<br>The physical treatment of fuels should only be accomplished based on the land and resource management objectives and fire management direction of the management area and should be commensurate with threats to life, property, public safety, values, hazards and risks. |
| Pest Management, Detection and Suppression | Integrated Pest Management (IPM) strategies will be utilized to manage pests within the constraints of laws and regulations, and to meet forest management objectives. IPM strategies include manual, mechanical, cultural, biological, chemical, prescribed fire and regulatory means. Strategy selection(s) will be based upon site specific environmental analysis. |

The following Standards and Guidelines apply to all management areas where timber harvest is scheduled:

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RANGE | |
| Range Administration and Management | To promote successful reforestation, grazing in reforestation areas should be limited to the degree practical until the trees are 2 feet tall. Thereafter, manage livestock activities to limit damage to less than 2 percent of the stems per year.<br>Until stands are certified established, reforestation following regeneration cutting shall receive priority in all management areas where timber management is practiced.<br>Grass, forb and shrub seeding shall not conflict with the silvicultural objectives of the stand. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | District Rangers shall recommend changes in Suitable land classification (plus or minus) to the the Forest Supervisor based upon project level data and analysis. Recommended changes shall be reported annually with the Reforestation and TSI Needs Report. District Rangers shall record recommended changes in TRI or other Data Base. When net recommended changes exceed 3 percent of the available Suitable lands, the Forest Supervisor shall recommend to the Regional Forester that the amount of Suitable land available for timber management be revised. Following Regional Forester approval, the Allowable Sale Quantity shall be recalculated.<br>Scheduled timber harvest shall only occur on Available, Suitable lands. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | The size, shape and layout of harvest units and timber stand improvements shall be designed subject to the resource emphasis of the Management Area. These emphases include: cover, dispersion, visual quality, recreation opportunity, regeneration, and economic and operational feasibility. |
|  | Cutting snags greater than 10" DBH for fuelwood or for miscellaneous forest products shall be prohibited on National Forest lands east of the Okanogan River and in the area known as the "south summit" which lies south of Highway 20 between the Methow and Okanogan Rivers. Other portions of the National Forest may be closed to snag cutting should it become necessary to prevent unacceptable loss of cavity nestor habitat. |
| Regeneration Harvests | Minimize damage to residual stocking during harvest final removal. |
|  | Both even-aged and uneven-aged systems may be applied in the Low Productive working group. |
|  | Clearcutting shall be prescribed only where it is determined to be the optimum method of regeneration to meet multiple use objectives. To be determined as the optimum method, the silvics of managed conifer species and micro-encironments created by clearcutting must be biologically compatible and there must be reasonable assurance that reforestation may be accomplished within prescribed time frames. In addition, there must be no overriding factors such as soil stability, visuals or social concerns that would preclude selection of clearcutting as the preferred harvest method, and one or more of the following criteria must be met: |

best copy available

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | 1. Multiple-use considerations such as visual or recreation management, wildlife management, watershed management or range management indicate that substantial benefits may be obtained by clearcutting as opposed to harvest by other methods. |
| | 2. Existing fuel loading or fuel loading created by harvesting and subsequent cultural activities is sufficient that it is not economically or operationally feasible to protect residual trees, or to avoid unacceptable soil or watershed damage during treatment of activity fuels. |
| | 3. Root rots or dwarf mistletoes are present in the stand and are sufficiently serious that significant mortality and volume losses are likely to occur if susceptible species are perpetuated in the regenerated stand. |
| | 4. Topographic location, soil depth, species composition or other factors indicate that significant windthrow is likely to occur in residual trees following harvesting by other methods. |
| | 5. Economic and operational considerations such as logging or species valuation indicate insufficient volume or value will be present in the residual stand to permit silviculturally necessary subsequent treatments to occur. |
| | 6. Where because of the effects of insects, disease or generally poor physiological condition (vigor) it is unlikely that residual trees following shelterwood cutting, seed tree cutting or selection cutting would produce adequate amounts of seed to reforest the stand, and multiple-use of resource considerations do not preclude selection of clearcutting as the harvest method. |
| | 7. Following a natural catastrophic event such as fire, insect attack or windthrow. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Stands selected for treatment shall generally have the highest silvicultural priority, subject to the resource emphasis of the management area. Diseased stands and stands subject to imminent insect attack shall be treated before other stands. |
|  | Where practicable, employ natural regeneration. |
|  | Rotation length shall meet or exceed 95 percent of the culmination of mean annual increment (CMAI). |
|  | When a diseased overstory is present following a shelterwood or seed tree cut, final removal should be scheduled to occur 6 to 10 years following the seed cut. |
| Intermediate Harvests | Minimize damage to residual stands during intermediate entries. |
|  | Sanitation and salvage harvests may occur. |
|  | Commercial thinnings should only occur where sufficient volume is available to pay for the operation or where thinning is necessary to attain silvicultural objectives to meet the resource emphasis of the Management Area. |
|  | Commercial thinnings shall be from below. |
|  | Intermediate harvests should not intensify existing insect or disease problems, and should reduce the impact of damaging agents on the future stand. |
|  | To the extent practicable, fuel treatments shall minimize damage to residual stems. Crop tree stocking should not be reduced by fuel treatments. |
|  | Commercial thinning should not occur in stands in the Low Productive working group. |
| Silvicultural Exams and Prescriptions | Prescriptions shall be approved by a certified silviculturist prior to each activity. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Exams shall preceed all harvest activities. |
| | Data collected shall be in accordance with Regional Guidelines, and shall be of sufficient quality to Certify Reforestation (E04) and TSI (E05), and for upward reporting. |
| | Stand diagnosis and analysis shall address project level reforestation difficulty. Project level analysis may more precisely locate boundaries of suitable and unsuitable lands. |
| Reforestation | When practicable, accomplish site preparation objectives concurrently with fuels management objectives. |
| | Interplanting should not be done. When contiguous portions of stands over 1 acre in size fall below minimum stocking, site preparation and replanting should be prescribed. |
| | Site preparation shall occur prior to reforestation by planting or natural regeneration. |
| | Where cost effective, animal (including livestock) damage control measures should be applied to reforestation areas where necessary to protect investments. |
| | Where adequate natural regeneration has not occurred by the 4th year stocking survey, stands should be re-site prepared and planted, except on lands producing less than 20 cubic feet per acre per year. |
| | To the extent practicable, lodgepole pine stands should be regenerated naturally. |
| | Where planting is prescribed, site preparation should occur as soon as practical after harvest. |
| | The majority of prescribed planting or direct seeding should occur within 9 months of site preparation. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Adequate tree storage and tree handling facilities shall be procured to insure all nursery stock used is in optimum condition to grow following outplanting.<br>Stand composition should be mixed species within stands when possible.<br>Until stands are certified as established reforestation following regeneration cutting shall receive priority in all management areas where timber management is practiced.<br>To promote successful reforestation, grazing in reforestation areas should be limited to the degree practical until the trees are 2 feet tall. Thereafter, manage livestock activities to limit damage to less than 2 percent of the stems per year.<br>Planting and artificial seeding should not occur in the Low Productive working group. |
| Timber Stand Improvement | Where precommercial thinning is prescribed, it should produce the desired stand condition at the next commercial entry.<br>Precommercial thinning from below shall be prescribed.<br>All precommercial thinning and timber stand improvement activities should be designed to minimize the spread of disease, or the creation of conditions favorable to injurious forest insects.<br>Precommercial thinning opportunities shall be ranked by PNV. Costs that shall be considered in the analysis shall include cost of thinning, fuel abatement costs and other costs directly associated with accomplishment of the activity. Stands with higher PNV shall receive priority for treatment, subject to the resource emphasis of the management area. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Where precommercial thinning is prescribed in managed stands, average crop tree height should be between 6 and 12 feet. To the extent practicable, precommercial thinning should occur early enough to avoid the need for slash treatment. |
| | Animal (including livestock) damage control measures should be applied to seedling/sapling/pole stands where necessary and cost effective to protect investments. |
| | Precommercial thinning should not occur in the Low Productive working group. |
| Timber Sale Preparation | Harvest plans shall be designed to provide for subsequent entries in adjacent stands. |
| | When practicable, sufficient volume should be retained in shelterwood seed cut entries to provide for economical entry at overstory removal. |
| | To protect the soil resource, ground yarding systems should be restricted to slopes less than 35 percent. Exceptions to this shall be decided on a case-by-case basis. |
| | Scheduled timber harvest activities shall occur only on suitable lands. Non-scheduled harvests may occur on unsuitable lands where the objective of the project or sale is for other than timber management purposes. |
| Nursery Management | Seed used for reforestation shall be Source Identified Area (SIA) seed or better. Genetically improved seed (SB) from the tree improvement program shall be used for reforestation as it becomes available, and according to direction in the Forest Tree Improvement Plan. |
| Genetic Forest Tree Improvement Program | Establish all seed orchards by the end of the planning cycle. |
| | Culture select trees to maximize fertile cone production. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Protect select trees from damage during management activities. Provide breeding partners for select trees. Groves of sexually mature trees, one acre or greater in size, with desirable characteristics shall be maintained around each tree. |
| PROTECTION |  |
| Fuel Management Inventory and Fuels Treatment | Following the seed cut of shelterwood and seed tree harvests, fuels should be treated to a level which shall eliminate the need for treatment of activity fuels following overstory removal.<br>To the extent practicable, fuel treatments following precommercial thinning and commercial thinning should minimize damage to residual stems. Crop tree stocking shall not be reduced below prescribed minimum levels by fuel treatments. |

# MANAGEMENT PRESCRIPTIONS

The National Forest land within the Okanogan National Forest has been divided into 17 management areas, each with different management goals, resource potential and limitations. The management areas are shown on the accompanying map, which can be used for reference. The management area maps of record will consist of a set of larger scale (1"/mile) maps on file in the Forest Supervisor's Office. These maps will be constructed upon selection of a final Forest Plan.

Except for Congressionally established boundaries, the management area boundaries are not firm lines and do not always follow easily found topographic features, such as major ridges. The boundaries represent a transition from one set of opportunities and constraints to another with management direction established for each. The boundaries are flexible to assure that the values identified are protected and to incorporate additional information gained from site specific reconnaissance and analysis.

This section describes the prescriptions for each management area. The prescriptions consist of goals, management standards and guidelines, and management practices.

## PRESCRIPTION 1

GOAL STATEMENT: Maximize present net value (PNV) of timber management activities while culturing and harvesting the timber resource.

DESCRIPTION: This applies to suitable lands in Management Area One.

DESIRED FUTURE CONDITION: Clearcut and seed tree units would generally be 40 acres or less in size. Shelterwood units would generally be 100 acres or less in size.

On suitable lands capable of producing 20 cubic feet per acre CMAI, stands will be well stocked and thrifty. All age classes will be represented in the forest in even-aged stands. On Low Productive lands, stands would be variable in structure. Even- aged stands would predominate lodgepole pine stands. All aged stands would predominate in mixed conifer stands. Access will permit intensive management of productive stands.

On lands capable of producing 20 cubic feet per acre CMAI, silvicultural regimes would maximize present net value (PNV) while achieving a high culmination of mean annual increment (CMAI). Harvest units would be as large as is biologically feasible, subject to the 40 acre limitation on created openings (with exceptions). Reforestation may be by artificial or by natural regeneration. Thorough site preparation would occur. Grass seeding in reforestation areas would be for, or compatible with, silvicultural objectives. Precommercial thinning may be prescribed on all suitable lands. Commercial thinning would generally be limited to tractor or short span operable ground. Tree improvement program will be Level 2 west of the Okanogan River and Level 3 east of the Okanogan River. Rotation would be based on 95% CMAI. An adequate transportation system would be developed and maintained to facilitate intensive timber management activities. Minimize losses from insects, disease, wildfire and weeds.

On lands in the Low Productive working group, silvicultural regimes applied will minimize present net value of costs while achieving a high present net worth. Precommercial thinning and commercial thinning would not be practiced.

ACTIVITY : STANDARDS AND GUIDELINES

## RECREATION

**Recreation Planning**

The Visual Quality Objective shall be modification in all sensitivity level 1 road and trail corridors and maximum modification in all other areas.

## FISH AND WILDLIFE

**Wildlife Surveys, Planning, Prescriptions, Monitoring Cooperation and Administration**

Manage all identified deer winter range for the following, where possible:

| Winter Range Cover | East of the Okanogan R. | Methow & other |
|---|---|---|
| Snow Intercept Thermal | ≥15% | ≥15% |
| Winter Thermal | ≥ 5% | ≥10% |
| Hiding | ≥15% | ≥ 0% |
| Total: | ≥35% | ≥25% |

Where potential is not present, manage to approach these percentages as closely as possible.

Minimum cover amounts shall be 30% (15% hiding and 15% summer thermal cover) on deer non-winter range.

In mixed conifer stands, snags shall be provided for at least 20% of potential woodpecker population size on a 320 acre basis. When potential is not present on forested lands, manage to approach this percentage as closely as possible.

## RANGE

**Range Resource Planning and Inventory**

50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock use and 30% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| TIMBER | |
| Timber Resource Management Planning and Inventories | To the extent practicable, fuelwood use of slash generated by logging and other silvicultural activities shall be encouraged. When practicable, encourage fuelwood use of non-merchantable live trees to accomplish silvicultural objectives. |
| Regeneration Harvests | Rotation length shall be based on maximizing present net value. |
| | The time frame between seed cuts and harvest final removal cut of shelterwoods and seed trees should be 7 to 14 years. |
| | Final overstory removal cuts from existing shelterwoods should be accomplished during the first decade of the Forest Plan. |
| | Provide green tree replacements for snags as necessary to meet 20 percent potential woodpecker population size. |
| | Merchantable mortality on sites accessible to tractor or short span yarding systems should be salvaged when economically feasible. |
| | Even-aged management shall be practiced in the Moist Productive, Dry Productive and Lodgepole Pine working groups. |
| | Both even-aged and uneven-aged management shall be applied in the Low Productive working group. |
| Intermediate Harvests | Commercial thinning should not occur in the Low Productive working group. |
| Reforestation | Planting and artificial seeding should not occur in the Low Productive working group. |
| Timber Stand Improvement | Precommercial thinning may be prescribed in stands in the Dry Productive and Moist Productive working groups. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Precommercial thinning shall be planned to attain maximum merchantable cubic foot volume at rotation. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be unrestricted except to protect roads, soils and water resources. Operating season for logging and post sale operations shall be coordinated with recreation activities conducted under agreement or special use permit. To protect deer during severe winters (January through March) and to protect fawning (June), the operating season may be restricted on a case-by-case basis in deer winter range and fawning areas. |
| FACILITIES | |
| Transportation System Planning, Construction, Operation and Maintenance | Local road access for timber management shall be adequate for logging, post sale and protection.<br>Long-term local roads for timber access shall be planned, constructed, maintained and operated to be economically efficient. During commercial hauling activities, public access shall be discouraged or prohibited. High clearance vehicles shall be accepted during post sale activities, and all motorized traffic shall be discouraged or eliminated after post sale activities.<br>To limit wildlife harassment, roads open to motorized vehicles (not including snow machines) should be at a density less than 3 miles per square mile (on a management area basis) following post sale activities.<br>Access by motorized vehicles on deer winter range shall be prohibited January through March, except where designated open. Winter haul shall be decided on a case-by-case basis.<br>Generally, commercial hauling operations on arterials and collectors shall take precedence over recreation traffic. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| PROTECTION | |
| Fire Suppression Strategy | All wildfires should be controlled at 10 acres or less. Exception to the 10 acre control objective would be for containment in fire tolerant stands at Fire Intensity Level 2 or lower. |
| | Limit destructive burned acreage in stands under intensive management. |
| Fuel Management Inventory and Fuels Treatment | Treat fuels to preclude wildfires at Fire Intensity Level 3 or above. Prescribe level of fuel treatment to protect stands under intensive management. To the extent practicable: (1) maintain and enhance usable forage, (2) maintain animal travel routes, (3) utilize fuel treatment methods that minimize cost, site disturbance, loss of residual stand and the deterioration of site productivity, and (4) place fire tolerant stands on an underburning schedule where cost effective to meet protection, fuels management and silvicultural objectives. |
| | Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |
| Pest Management, Detection, Suppression and Prevention | Stands with a high level of dwarf mistletoe or root rot shall receive the highest priority for regeneration. |
| | Aggressively suppress insects and diseases when outbreaks threaten resource management. Use principles of integrated pest management to select suppression strategies. |
| | High intensity prevention with sound principles of integrated pest management shall be used. Monitor populations of major pests to be forewarned of outbreak situations. |

# PRESCRIPTION 2

**GOAL STATEMENT:** Intensively manage range land. Timber harvest schedules would be required to conform to range objectives under this strategy.

**DESCRIPTION:** This applies to selected areas within Management Area 1 on suitable range land that is also suited for timber management. Suitable timber lands where this prescription is applied are capable of producing 20 cubic feet per acre CMAI and are in the lodgepole pine working group.

**DESIRED FUTURE CONDITION:** Created openings (clearcuts, seed tree cuts and over story removals) will be less than 40 acres in size. Shelterwood and intermediate harvests will be less than 100 acres in size. All age classes of commercial conifers will be represented in the forest in even-aged stands. Management seeks to optimize production and utilization of forage available for livestock use consistent with maintaining the environment and providing for multiple-use of the range. Cultural practices such as brush control or seeding may be combined with fencing and water developments to implement complex grazing systems.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | Visual Quality Objectives of modification shall be met in Level 1 road and trail corridors, and maximum modification shall be met elsewhere. |
| Trail Maintenance and Operation | Permittee responsible to restore and maintain recreation trails after use as a livestock driveway. Incidental livestock use is acceptable. |

<table>
<tr><th>ACTIVITY</th><th>STANDARDS AND GUIDELINES</th></tr>
<tr><td>FISH AND WILDLIFE</td><td></td></tr>
<tr><td>Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration</td><td>Manage all identified deer winter range for the following, where possible:
<table>
<tr><th>Winter Range Cover</th><th>East of the Okanogan R.</th><th>Methow & other</th></tr>
<tr><td>Snow Intercept Thermal</td><td>≥15%</td><td>≥15%</td></tr>
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<tr><td>Total:</td><td>≥35%</td><td>≥25%</td></tr>
</table>
Where potential is not present, manage to approach these percentages as closely as possible.<br>Minimum cover amounts shall be 30% (15% hiding and 15% summer thermal cover) on deer non-winter range.<br>In mixed conifer stands, snags shall be provided for at least 20 percent of potential woodpecker population size, on a 320-acre basis. When potential is not present on forested lands, manage to approach this percentage as closely as possible.</td></tr>
<tr><td>Structural Habitat Improvements and Maintenance</td><td>Protect springs to provide wildlife habitat as long as this is compatible with range objectives.</td></tr>
<tr><td>RANGE</td><td></td></tr>
<tr><td>Range Resource Planning and Inventory</td><td>50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock use and 30% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area.</td></tr>
<tr><td>Range Non-Structural Improvements - Maintenance</td><td>Maintain improvements as needed.</td></tr>
</table>

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Range Structural Improvements - New | Install as needed for good range management. |
| Range Structural Improvements - Maintenance | Inspect 30 percent per year. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Timber management activities should be scheduled to minimize disruption of range management activities and scheduling of use.<br>To the extent practicable, fuelwood use of slash generated by logging and other silvicultural activities shall be encouraged. When practicable, encourage fuelwood use of non-merchantable live trees to accomplish silvicultural objectives. |
| Regeneration Harvests | Stands shall be harvested as early as possible following CMAI.<br>Even-aged management shall be practiced in the Moist Productive, Dry Productive and Lodgepole Pine working groups.<br>Rotation length shall be based on maximizing present net value.<br>Provide green tree replacements for snags as necessary to meet 20 percent potential woodpecker population size.<br>Diseased stands and stands subject to imminent insect attack shall be treated before other stands, unless acreage is too large and impact on other resources (e.g. grazing allotments) is too great.<br>The time frame between seed cut and harvest final removal cut of shelterwoods and seed trees should be 7 to 14 years. When a diseased overstory is present, final removal should occur 6 to 10 years after the seed cut. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Final overstory removal cuts from existing shelterwoods should be accomplished during the first decade of the Forest Plan. |
| Reforestation | To the extent practicable, a minimum of 1 AUM per 7 acres should be maintained. |
| Timber Stand Improvement | Crop tree stocking following precommercial thinning shall produce a high volume increment while maximizing the period that crown closure is ≤50% during the rotation. Stands where no commercial this is planned shall be precommercial thinned to attain maximum merchantable cubic foot volume at rotation. Crown closure shall be ≤50% for at least 1/2 the rotation.<br>Precommercial thinning may be prescribed to maintain forage production. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be unrestricted other than to protect roads, soil and water resources. The operating season for logging and post sale operations shall be coordinated with recreation activities conducted under agreement or special use permit. To protect deer during severe winters and to protect fawning, the operating season shall be restricted on a case-by-case basis in deer winter range (January through March) and in fawning areas (June). |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Transportation System Planning, Construction, Operation and Maintenance | The transportation system should be adequate for logging, post sale and protection.<br>Long-term local roads for timber access should be planned, constructed, maintained and operated to be economically efficient. During commercial hauling, public access shall be discouraged or prohibited. High clearance vehicles should be accepted during post sale activities. All motorized traffic on new local roads should be discouraged or eliminated after post sale activities and the road scarified and seeded; drainage structures may be converted to water catchment ponds.<br>Commercial hauling shall generally take priority over recreation traffic on arterials and collectors.<br>To limit wildlife harassment, roads open to motorized vehicles (not including snow machines) should be at a density less than 3 miles per square mile (on a management area basis) following post sale activities.<br>Access by motorized recreation vehicles on deer winter range should be prohibited January through March, except where designated open. Winter haul shall be decided on a case-by-case basis. |
| PROTECTION | |
| Fire Suppression Strategy | All wildfires should be controlled at 10 acres or less. Exception to the 10 acre control objective is for containment in fire tolerant stands at Fire Intensity Level 2 or lower. Limit destructive burned acreage in stands under intensive management, to the extent practicable. |
| Fuel Management Inventory and Fuels Treatment | Treat fuels to preclude wildfires at Fire Intensity Level 3 or above. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Prescribe level of fuel treatment to protect stands under intensive management. To the extent practicable: (1) maintain or enhance usable forage, (2) maintain animal travel routes, (3) utilize fuel treatment methods that minimize cost, site disturbance, loss of residual stand and the deterioration of site quality, (4) place fire tolerant stands on an underburning schedule where cost effective. |
|  | Remove management created slash that is a barrier to grazing. |
| Pest Management Detection, Suppression and Prevention | Aggressively suppress insects and diseases when outbreaks threaten resource management. Use IPM to select suppression strategies. |
|  | High intensity prevention with sound IPM principles shall be used. Monitor populations of major pests to be forewarned of outbreak situations. |

# PRESCRIPTION 3

**GOAL STATEMENT:** Intensively manage range land.

**DESCRIPTION:** This applies to selected areas in Management Area 1 on suitable range land that is not capable of producing 20 cubic feet of timber per acre per year.

**DESIRED FUTURE CONDITION:** Management seeks to optimize production and utilization of forage available for livestock use consistent with maintaining the environment and providing for multiple use of the range. Cultural practices such as brush control or seeding may be combined with fencing and water developments to implement complex systems. Timber harvest would be allowed to improve range, but would not be scheduled.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The visual quality objective shall be modification in sensitivity level 1 road and trail corridors and maximum modification in all other areas. |
| Trail Maintenance and Operation | Permittee responsible to restore and maintain recreation trails after use as a livestock driveway. Incidental livestock use is acceptable. |
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Snags shall be provided for at least 20% of potential woodpecker population size on a 320-acre basis. Where potential is not present, manage to approach this percentage as closely as possible. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Structural Habitat Improvement and Maintenance | Provide wildlife escape ramps in stock tanks. |
| RANGE | |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock use and 30% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| Range Non-Structural Improvements | Reseed 5% annually all poor and fair condition range to bring to "good" condition (see Forest Service Handbook for condition definition). Remove trees where invading grasslands if crowding forage and not needed for livestock cover. |
| Range Non-Structural Improvements - Maintenance | Maintain 50% per year. |
| Range Structural Improvements - New | Construct fences and corrals, and develop water to meet "C or D" level management. |
| Range Structural Improvements - Maintenance | 30% of allotments should be inspected per year. Require permittee to maintain all structures. |
| Range Administration and Management | Issue grazing permits.<br>Develop and implement annual operating plan with permittee(s), and coordinate with other resource uses.<br>Enforce compliance with grazing permit.<br>Update management plans as needed annually and re-write every 5 to 10 years. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| TIMBER | |
| Timber Resource Management Planning and Inventories | Non-scheduled timber harvest can be used to achieve the range objectives of this strategy.<br>Accept fuelwood gathering consistent with the goals and objectives of the Management Area. |
| FACILITIES | |
| Road, Bridge, Culvert and Dam Planning, Design, Construction, Reconstruction, Operation and Management | The transportation system shall be coordinated with the needs of range.<br>To limit stock and wildlife harassment, roads open to motorized vehicles should be at a density less than 2 miles per square mile on a management area basis.<br>Access by motorized vehicles on deer winter range should be prohibited January through March, except where designated open. |
| PROTECTION | |
| Fire Suppression Strategy | All fires should be contained. Wildfires that threaten resources, capital investment or enter areas with a different fire management prescription should be contained or controlled. |
| Fuel Management Inventory and Fuels Treatment | Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |
| Pest Management Detection, Suppression and Prevention | Aggressively suppress insects and diseases when outbreaks threaten adjacent stands that are managed for timber production. Use principles of integrated pest management to select suppression strategies. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Pest populations shall be monitored to provide forewarning of outbreak situations that will pose a threat to adjacent timber producing lands. |
| | High intensity prevention with sound principles of integrated pest management shall be used. Monitor populations of major pests to be forewarned of outbreak situations. |

# PRESCRIPTION 4

**GOAL STATEMENT:** Provide summer and fall non-motorized recreational opportunities in a semi-primitive setting. The Visual Quality Objective is Retention.

**DESCRIPTION:** This applies to Management Area 4.

**DESIRED FUTURE CONDITION:** Recreation opportunities would be provided in areas characterized by a predominately natural or naturally appearing environment of moderate to large size. Users will have a high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self reliance through the application of outdoor skills in an environment that offers challenge and risk. Interaction between users would generally be low. Areas would be managed in such a way that minimum on-site controls and restriction may be present, but are subtle.

Only sanitation and salvage harvest may occur and this would be determined on a case-by-case basis.

Roads would not be constructed and existing roads would be inactivated with the following exception: reasonable access would be allowed for mineral exploration entry. Trail access would be provided to maintain or enhance recreation opportunities or meet recreation demand. Trails would be designed to the difficulty level appropriate to the target non-motorized user group. Motorized vehicle use shall not be permitted summer and fall. Motorized vehicle use would be permitted winter and spring unless restricted. Mechanized equipment may be used for trail maintenance during low use periods.

Development level 1 and 2 recreation facilities would only be provided for resource protection or to maintain or enhance recreation opportunities.

Domestic livestock grazing would be permitted but would conform with the needs of recreation.

All wildfires would generally be confined and prescribed fire may be used to meet land management objectives.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The visual quality objective shall be Retention. Exceptions are permitted for treatment of insects and disease as allowed under this strategy. |
| Facility Management | Development level 1 and 2 facilities shall only be provided when needed for resource protection or to maintain or enhance recreation opportunities and shall be maintained to standard. |
| Use Administration | Motorized vehicle use shall not be permitted summer and fall. Motorized vehicle use shall be permitted winter and spring unless restricted. |
| Trail System Maintenance and Operation | Existing necessary trails shall be operated and maintained to the difficulty level appropriate to the target non-motorized user group. Unnecessary trails shall be obliterated.<br>Mechanized equipment may be used for trail maintenance. Mechanized trail maintenance shall occur during low use periods. |
| Facility Reconstruction and Construction | Facilities needed for resource protection or to maintain or enhance recreation opportunities shall be reconstructed and constructed. |
| Trail Reconstruction and Construction | Existing necessary trails shall be reconstructed for resource protection, public safety and to maintain or enhance recreation opportunities. New trails may be constructed for resource protection, maintenance or enhancement of recreation opportunities or to meet recreation use demand. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RANGE | |
| Range Planning | 50% of the above-the-ground biomass shall be reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock use and 30% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Scheduled timber harvest shall not occur.<br>Sanitation and salvage harvest may occur based on the following criteria: (1) when necessary to protect the recreation and scenic values in the area or in adjacent management areas, and (2) when necessary to prevent the spread of disease or insects to adjacent management areas where timber production is the primary emphasis when losses would be substantial. |
| MINERALS | |
| Processing Exploration Applications | Roads may be allowed if a site specific analysis determines that roading is the only way to provide reasonable access. |
| LANDS | |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments recommended for study for wild and scenic river designation shall be protected (ref: Appendix G of DEIS). |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Road Operation and Maintenance; Local Road Construction | Roads shall not be constructed except where necessary to provide reasonable minerals exploration access. Existing roads shall be inactivated. |
| PROTECTION | |
| Fire Suppression Strategy | All wildfires shall be confined, except that wildfires which threaten resources, capital investments or to enter areas with different fire management direction shall be contained or controlled.<br>When containment or control action is required: (1) use minimum impact suppression guidelines when practicable; (2) use indirect attack techniques such as natural fuelbreaks, and changes in vegetative type and topography, whenever possible, and (3) minimize disturbances resulting from all phases and types of suppression. |
| Fuel Management Inventory and Fuels Treatment | Prescribed fire may be used to accomplish land management objectives. Activity created slash should be treated to reduce risk to investments and the public. Treatment should provide reasonable assurance that high intensity crown fires can be controlled within 1/4 mile of major travel routes or timber producing areas. |
| Forest Pest Management - Suppression | Insects and disease may be suppressed when necessary to protect the recreation and scenic values in the area or in adjacent management areas, when necessary to prevent the spread of insects and disease to adjacent management areas where timber production is the primary emphasis when losses would be substantial. |
| Forest Pest Management - Prevention | Pest populations shall be monitored to assure there is not an insect buildup that could spread to adjacent resource areas. |

## PRESCRIPTION 4m

GOAL STATEMENT: Provide year-round motorized recreational opportunities in a semi-primitive setting. The Visual Quality Objective is "Retention."

DESCRIPTION: This applies to Management Area 4m.

DESIRED FUTURE CONDITION: Recreation opportunities will be provided in areas characterized by a predominately natural or naturally appearing environment of moderate to large size. Users will have a moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self reliance through the application of outdoor skills in an environment that offers challenge and risk. Opportunities to have a high degree of interaction with the natural environment exist. Concentrations of users generally will be low. Areas will be managed in such a way that minimum on-site controls and restrictions may be present, but are subtle.

Only sanitation and salvage harvest may occur and this will be determined on a case-by-case basis.

Motorized vehicle use will be allowed year-round on designated trails, existing roads or areas. New roads will not be constructed with the following exception: reasonable access will be allowed for mineral exploration entry. Existing roads will be maintained at a standard to accept or encourage off-road, 4-wheel vehicles. Designated trails will be maintained to a difficulty level that encourages motorized 2-wheel trail vehicles.

Development level 1 and 2 recreation facilities will only be provided for resource protection or to maintain or enhance recreation opportunities.

Domestic livestock grazing will be permitted but would conform with the needs of recreation.

All wildfires will generally be confined and prescribed fire may be used to meet land management objectives.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The visual quality objective shall be Retention. Exceptions are permitted for treatment of insects or disease as allowed under this strategy. |
| Facility Management | Development level 1 and 2 facilities shall only be provided when needed for resource protection or to maintain or enhance recreation opportunities and shall be maintained to standard. |
| Use Administration | Motorized vehicle use shall be permitted year-round on designated trails, existing roads or areas. |
| Trail Operation and Maintenance | Designated trails shall be maintained to a level that encourages motorized 2-wheel trail vehicles. Remaining necessary trails shall be operated and maintained to the target level appropriate to the target non-motorized user group. Unnecessary trails shall be obliterated. |
| Facility Reconstruction and Construction | Facilities needed for resource protection or to maintain or enhance recreation opportunities shall be reconstructed and constructed. |
| Trail Reconstruction and Construction | Existing necessary trails shall be reconstructed for resource protection, public safety and to maintain or enhance recreation opportunities. New trails may be constructed for resource protection, maintenance or enhancement of recreation opportunities or to meet recreation use demands. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RANGE | |
| Range Planning | 50% of the above-the-ground biomass shall be reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock use and 30% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| TIMBER MANAGEMENT | |
| Timber Resource Management Planning and Inventory | Scheduled timber harvest shall not occur.<br>Sanitation and salvage harvests may occur based on the following criteria: (1) when necessary to protect the recreation and scenic values in the area or in adjacent management areas, and (2) when necessary to prevent the spread of insects or disease to adjacent management areas where timber production is primary emphasis when timber losses would be substantial. |
| MINERALS | |
| Processing Exploration Applications | Roads may be allowed if a site specific analysis determines that roading is the only way to provide reasonable access. |
| LANDS | |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments recommended for study for wild and scenic river designation shall be protected (ref: Appendix G of DEIS). |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Road Operation and Maintenance; Local Road Construction | New roads shall be constructed, except where necessary to provide reasonable minerals exploration access. Existing roads shall be maintained to accept or encourage off-road 4-wheel vehicles. |
| PROTECTION | |
| Fire Suppression Strategy | All wildfires shall be confined, except that wildfires which threaten resources, capital investments or to enter areas with different fire management direction shall be contained or controlled.<br>When containment or control action is required: (1) use minimum impact suppression guidelines when practicable, (2) use indirect attack techniques such fuelbreaks, changes in vegetative type and topography, wherever possible, and (3) minimize disturbances resulting from all phases and types of suppression. |
| Fuel Management Inventory and Fuels Treatment | Prescribed fire may be used to accomplish land management objectives. Activity created slash should be treated to reduce risk to investments and the public. Treatment should provide reasonable assurance that high intensity crown fires can be controlled within 1/4 mile of major travel routes and timber producing areas. |
| Forest Pest Management - Suppression | Insects and disease may be suppressed when necessary to protect the recreation and scenic values in the area or in adjacent management areas, or when necessary to prevent the spread of insects and disease to adjacent management areas where timber production is the primary emphasis when losses would be substantial. |
| Forest Pest Management - Prevention | Pest populations shall be monitored to assure there is not an insect buildup that could spread to adjacent resource areas. |

## PRESCRIPTION 5 (Retention)

GOAL STATEMENT: Provide the visual quality objective of retention in a roaded recreation setting.

DESCRIPTION: This applies to Management Area 5 on those areas with an inventoried Visual Quality Objective of Retention, except along the seen area of the Boulder Creek Road (#37) above the seen area of the Chewuck River viewshed. In the excepted area prescription 5 (partial retention) applies.

DESIRED FUTURE CONDITION: Roaded recreation opportunities and viewing experiences will be maintained or enhanced within selected viewsheds by maintaining a predominately natural appearing landscape with a diversity of age classes, size classes and species. Users will have a moderate to low probability of experiencing isolation from the sights and sounds of humans and a moderate to high probability of experiencing affiliation with other groups. Challenge and risk opportunities are not very important. Practice and testing outdoor skills may be important. Interaction between users ranges from low to high, but evidence of other users is prevalent. Management activities will not be evident to the casual visitor.

In the foreground, created openings (clearcuts, seed tree harvests and overstory removals) will generally be 3 acres or less in size. Shelterwoods will generally be 10 acres or less in size. In the middleground and background, created openings will generally be 7 acres or less and shelterwoods would be 15 acres or less. Intermediate harvests and timber stand improvement units will generally be 10 acres or less in foreground areas and 20 acres or less in middleground and background areas.

Even-aged management will be practiced in the Lodgepole working group and will generally be practiced in the Moist and Dry Productive working groups. Uneven-aged methods may be practiced in the Moist and Dry Productive working groups based on a site specific analysis.

Both regeneration and intermediate timber harvest will occur. These activities will be designed to provide: (1) 15% of the stands or 15% of the area in foreground in trees that exceed 24" dbh in mixed conifer and 10" dbh in lodgepole, (2) a vegetative condition that meets retention in perpetuity, and (3) 10% of the stands or 10% of the area in middleground in trees that exceed 18" dbh in mixed conifer and 7" dbh in lodgepole.

Activities would be required to meet the VQO of retention within 3 years of activity.

Arterial and collector roads will be reconstructed and maintained to encourage use by recreationists in highway vehicles. Local roads to developed recreation sites will be operated to encourage highway vehicles. Other local roads will be operated to accept high clearance vehicles. Motorized vehicle use (except snow machines) will be eliminated or prohibited on roads that exceed a road density of 3 miles per square mile to limit wildlife harassment. Trails may be constructed, reconstructed and maintained to access special features, classified areas and recreation management emphasis areas or to enhance developed site opportunities.

Development level 1 and 2 recreation facilities will only be provided for resource protection or to maintain or enhance recreation opportunities.

All identified deer winter range will be managed for a minimum of 25%-35% winter range cover, where possible. On deer non-winter range, the minimum cover amount will be 30% summer range cover. Snags will be provided at the 40% level where possible.

Domestic livestock grazing will be permitted, but would conform with the needs of recreation.

All wildfires will be controlled at 10 acres or less. Exceptions to the 10-acre control objective will be for containment in fire tolerant stands at Fire Intensity Level 1.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The visual quality objective shall be "Retention." Exceptions are permitted for treatment of insects and/or disease as allowed under this strategy.<br>Viewshed corridor plans shall be completed completed for all retention viewsheds. |

<table>
<tr><th>ACTIVITY</th><th>STANDARDS AND GUIDELINES</th></tr>
<tr><td>Facility Management</td><td>Development level 1 and 2 facilities shall only be provided when needed for resource protection or to maintain or enhance recreation opportunities and shall be maintained to standard.</td></tr>
<tr><td>Facility Reconstruction and Construction</td><td>Facilities needed for resource protection or to maintain or enhance recreation opportunities shall be reconstructed and constructed.</td></tr>
<tr><td>Trail Reconstruction, Trail Construction</td><td>Existing necessary trails shall be reconstructed for resource protection or public safety purposes.<br>New trails may be constructed as access to special features, classified areas, recreation management emphasis areas or to enhance developed site opportunities.</td></tr>
<tr><td>Trail Operation and Maintenance</td><td>Existing trails necessary as access to special features, classified areas, recreation management areas or to enhance developed site opportunities shall be operated and maintained to the level appropriate to the target user groups. Unnecessary trails shall be obliterated.</td></tr>
<tr><td>FISH AND WILDLIFE</td><td></td></tr>
<tr><td>Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration</td><td>All identified deer winter range shall be managed for the following, where possible:
<table>
<tr><th>Winter Range Cover</th><th>East of the Okanogan R.</th><th>Methow & other</th></tr>
<tr><td>Snow Intercept Thermal</td><td>≥15%</td><td>≥15%</td></tr>
<tr><td>Winter Thermal</td><td>≥ 5%</td><td>≥10%</td></tr>
<tr><td>Hiding</td><td>≥15%</td><td>≥ 0%</td></tr>
<tr><td>Total:</td><td>≥35%</td><td>≥25%</td></tr>
</table>
Where potential is not present, manage to approach these percentages as closely as possible.</td></tr>
</table>

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Minimum cover amounts shall be 30% (15% hiding and 15% summer thermal cover) on deer non-winter range.<br>In mixed conifer stands, snags shall be provided for at least 40% of potential woodpecker population size on a 320-acre basis. Where potential is not present on forested lands, manage to approach this percentage as closely as possible. |
| RANGE |  |
| Range Resource Planning and Inventory | 50% of the above the ground biomass shall be reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock and 30 percent should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| TIMBER |  |
| Timber Resource Management Planning and Inventories | Timber activities shall be designed to: (1) provide a vegetative condition that meets retention in perpetuity; (2) provide 15% of the stands or 15% of the foreground area in trees that exceed 24" dbh in mixed conifer stands and 10" dbh in managed lodgepole stands; and (3) provide 10% of the stands or 10% of the middleground area in trees that equal or exceed 18" dbh in mixed conifer stands and 7" dbh in managed lodgepole stands.<br>Accept fuelwood gathering consistent with the goals, standards and guidelines of this management area. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Regeneration Harvest | Even-aged methods shall be applied in the Lodgepole Pine working group. Even-aged methods should generally be applied in the Moist and Dry productive working groups, except that uneven-aged methods (primarily group selection) may be applied where site-specific analysis determines they will best meet management direction. |
| | Green tree replacements shall be provided as necessary to meet the 40% woodpecker population size. |
| | In even-aged sivicultural systems where seed tree and shelterwood cutting is practiced, overwood should not be removed until dominant trees reach 20 feet in height. |
| | Rotation lengths are based on meeting the target tree sizes. |
| | A created opening for visual resource management is defined as an area where dominant trees are less than 20 feet tall; this includes clearcuts and seed tree harvests. |
| Intermediate Harvest | Sanitation and salvage harvests shall be allowed on a case-by-case basis to protect the stand. |
| | Thinning unit sizes shall be limited to 20 acres in middleground. |
| Timber Stand Improvement | Precommercial thinning may be prescribed to attain stand diameter objectives. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be restricted as needed to protect the soil, water, roads, and recreation uses and activities. To protect deer in severe winters (January through March) and to protect fawning (June), the operating season may be restricted on a case-by-case basis in deer winter range and fawning areas. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Genetic Tree Improvement | Select trees shall be identified to the extent necessary to ensure they can be relocated. Excess marking shall be avoided. |
| LANDS | |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments recomended for study for wild and scenic river designation shall be protected (ref: Appendix G of DEIS). |
| FACILITIES | |
| Road Operation and Maintenance | Arterial and collector roads should be reconstructed and/or operated and maintained to encourage use by recreationists in highway vehicles.<br>Generally, local roads should be reconstructed, operated and maintained to: (1) encourage highway vehicle access to developed recreation sites; (2) encourage high clearance vehicle and discourage passenger cars on other roads. During commercial hauling activities, public access should be discouraged.<br>To limit wildlife harassment, roads open to motorized vehicles (not including snow machines) should be at a density of less than 3 miles per square mile (on a management area basis) following post sale activities. |
| Local Road Construction | Local roads may be constructed as needed for additional public recreation needs or to access adjacent timber lands. Transportation plans shall consider future entries. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| PROTECTION | |
| Fire Suppression Strategy | All wildfires should be controlled at 10 acres or less. Exception to the 10 acre control objective would be for containment in fire tolerant stands at Fire Intensity Level 1. To the extent practicable:<br>1. Minimize evidence of suppression action along major transportation routes and key recreation areas,<br>2. Limit the number of burned areas by wildfire, and<br>3. Protect the public and capital investments. |
| Fuel Management Inventory and Fuels Treatment | Use of prescribed fire should meet the VQO of retention within three years of application.<br>Visual values shall be key considerations in determining overall fuel treatment level methods.<br>Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |
| Forest Pest Management - Suppression | Insects and diseases shall be suppressed when outbreaks threaten managed resources and/or users. Suppression methods that minimize site disturbance shall be used. |
| Forest Pest Management - Prevention | Stands shall be managed to control insect and disease problems to minimize outbreaks and to minimize the risk to recreation users from endemic populations. |

## PRESCRIPTION 5 (Partial Retention)

GOAL_STATEMENT: Provide the visual quality objective of Partial Retention in a roaded recreation setting.

DESCRIPTION: This applies to Management Area 5 on those areas with an inventoried VQO of Partial Retention and along the seen area of the Boulder Creek Road (#37) above the seen area of the Chewuck River viewshed.

SUMMARY: Roaded recreation opportunities and viewing experiences will be maintained or enhanced along selected viewsheds by maintaining a predominately natural appearing landscape with a diversity of age classes, size classes and species. Users will have a moderate to low probability of experiencing isolation from the sights and sounds of humans and a moderate to high probability of experiencing affiliation with other user groups. Challenge and risk opportunities are not very important. Practice and testing of outdoor skills may be important. Interaction between users ranges from low to high, but evidence of other users is prevalent. Management activities may be evident, but will remain subordinate to the surrounding landscape.

In the foreground, created openings (clearcuts, seed tree harvests and overstory removals) will generally be 7 acres or less in size. Shelterwoods will generally be 15 acres or less in size. In the middleground, created openings and shelterwoods will generally be 20 acres or less, and in the background will generally be 40 acres or less. Intermediate harvest and timber stand improvement units will generally be 15 acres or less in the foreground, and 40 acres or less in the middleground and background.

Even-aged management will be practiced in the Lodgepole working group and will generally be practiced in the Moist and Dry Productive working groups. Uneven-aged methods may be practiced in the Moist and Dry Productive working groups based on a site- specific analysis.

Both regeneration and intermediate timber harvest will occur. These activities will be designed to provide at least 30% of the stands in foreground with trees greater than 16" dbh in mixed conifer and 7" in lodgepole.

Activities will be required to meet the VQO of partial retention within 3 years of activity.

Arterial and collector roads will be reconstructed and maintained to encourage use by recreationists in highway vehicles. Local roads to developed recreation sites will be operated to encourage highway vehicles. Other local roads will be operated to accept high clearance vehicles. Motorized vehicle use (except snow machines) will be eliminated or prohibited on those roads exceeding 3 miles per square mile road density to limit wildlife harassment. Trails will be constructed, reconstructed and maintained to access special features, classified areas and recreation management emphasis areas.

Development level 1 and 2 recreation facilities will only be provided for resource protection.

All identified deer winter range will be managed to provided for a minimum of 25%-35% winter range cover where possible. On deer non-winter range, the minimum cover amount will be 30% summer range cover. Snags will be provided at the 40% level where possible.

Domestic livestock grazing will be permitted, but would conform with the needs of recreation.

All wildfires will be controlled at 10 acres or less. Exceptions to the 10-acre control objective will be for containment in fire tolerant stands at Fire Intensity Level 1.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The visual quality objective shall be Partial Retention. Exceptions are permitted for treatment of insects and/or disease as allowed under this strategy.<br>Viewshed corridor plans shall be completed for all partial retention viewsheds. |
| Facility and Site Management | Development level 1 and 2 facilities shall only be provided when needed for resource protection and shall be maintained to standard. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Facility Reconstruction and Construction | Only those facilities needed for resource protection shall be reconstructed. |
| Trail Reconstruction, Trail Construction | Existing necessary trails shall be reconstructed for resource protection or public safety purposes. New trails may be constructed as access to special features, classified areas, recreation management emphasis areas or to enhance developed site opportunities. |
| Trail Operation and Maintenance | Existing trails necessary as access to special features, classified areas, recreation management emphasis areas or to enhance developed site opportunities shall be operated and maintained to the level appropriate to the target user group. Unnecessary trails shall be obliterated. |

FISH AND WILDLIFE

Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration

All identified deer winter range shall be managed for the following, where possible:

| Winter Range Cover | East of the Okanogan R. | Methow & other |
|---|---|---|
| Snow Intercept Thermal | ≥15% | ≥15% |
| Winter Thermal | ≥ 5% | ≥10% |
| Hiding | ≥15% | ≥ 0% |
| Total: | ≥35% | ≥25% |

Where potential is not present, manage to approach these percentages as closely as possible.

Minimum cover amounts shall be 30% (15% hiding and 15% summer thermal cover) on deer non-winter range.

In mixed conifer stands, snags shall be provided for at least 40% of potential woodpecker population size on a 320-acre basis. Where potential is not present, manage to approach this percentage as closely as possible.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RANGE | |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass shall be reserved for vigor and maintenance of grass plants. Of the remainder, 70% of the annual grass production should be for livestock use and 30% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| TIMBER | |
| Timber Resource Management Planning and Inventory | Timber activities shall be designed to provide at least 30% of the stands in foreground with trees equalling or exceeding 16" dbh in mixed conifer stands and 7" in managed lodgepole stands.<br>Accept fuelwood gathering consistent with the goals, standards and guidelines of this management area. |
| Regeneration Harvest | Even-aged methods shall be applied in the Lodgepole Pine working group. Even-aged methods should generally be applied in the Moist and Dry Productive working groups, except that uneven-aged methods (primarily group selection) may be applied where site-specific analysis determines they will best meet management direction.<br>A created opening for visual resource management is defined as an area where dominant trees are less than 20 feet tall; this includes clearcuts and seed tree harvests.<br>No more than 18% of any foreground corridor shall have created openings at any one time.<br>In even-aged silvicultural systems where seed tree and shelterwood cutting is practiced, overwood should not be removed until reproduction reaches 20 feet tall. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Green tree replacements shall be provided as necessary to meet the 40% woodpecker population size.<br>Rotation lengths shall be based on meeting the target tree sizes. |
| Intermediate Harvest | Sanitation and salvage harvests shall be allowed on a case-by-case basis to protect stand. |
| Timber Stand Improvement | Precommercial thinning may be prescribed to attain stand diameter objectives. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be restricted as needed to protect soil, water, roads and recreation uses and activities. To protect deer during severe winters (January through March) and to protect fawning (June), the operating season may be restricted on a case-by-case basis in deer winter range and in fawning areas. |
| Genetic Forest Tree Improvement Program | Select trees shall be identified to the extent necessary to ensure they can be relocated. Excess marking shall be avoided. |
| LANDS |  |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments recommended for study for Wild and Scenic River designation shall be protected. (Ref: Appendix G of DEIS). |
| FACILITIES |  |
| Road Operation and Maintenance | Arterial and collector roads should be reconstructed and/or operated and maintained to encourage use by recreationists in highway vehicles. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Generally, local roads should be reconstructed, operated and maintained to: (1) encourage highway vehicle access to developed recreation sites, and (2) encourage high clearance vehicles and discourage passenger cars on other roads. During commercial hauling activities, public access should be discouraged. |
| | To limit wildlife harassment, roads open to motorized vehicles (not including snow machines) should be at a density less than 3 miles per square mile (on a management area basis) following post sale activities. |
| Local Road Construction | Local roads may be constructed for additional needs or to access adjacent timber lands. Transportation plans shall consider future entries. |
| PROTECTION | |
| Fire Suppression Strategy | All wildfires should be controlled at 10 acres or less. Exception to the 10 acre control objective would be for containment in fire tolerant stands at Fire Intensity 1. To the extent practicable: (1) minimize evidence of suppression action along major transportation routes and key recreation areas, (2) limit the number of burned areas by wildfire, and (3) protect the public and capital investments. |
| Fuel Management Inventory and Fuels Treatment | Use of prescribed fire should meet the VQO of partial retention within 3 years of application. |
| | Visual values shall be key considerations in determining overall fuel treatment level methods. |
| | Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Forest Pest Management - Suppression | Insects and diseases shall be suppressed when outbreaks threaten managed resources and/or users. Suppression methods that minimize site disturbance should be used. |
| Forest Pest Management - Prevention | Stands shall be managed to control insect and disease problems to minimize outbreaks and to minimize the risk to recreation users from endemic populations. |

# PRESCRIPTION 7

GOAL STATEMENT: To maintain a high quality visual setting within the North Cascades Scenic Highway, while providing recreational opportunities.

DESCRIPTION: This applies only to that area included in the North Cascades Scenic Highway designated by Congress in the Washington State Wilderness Act of 1984.

DESIRED FUTURE CONDITION: Recreation opportunities in the area will be maintained or enhanced while providing high scenic values.

Timber management activities will only be permitted when necessary to enhance recreation and scenic opportunities. Suppression of insects and disease may occur.

Only those new roads necessary to enchance recreation opportunities or to provide reasonable access to valid mineral claims or leases will be constructed. New roads needed for recreation will be constructed. Local roads needed for recreation will be operated to encourage use by highway vehicles. All other local roads will be evaluated and inactivated as feasible. 2-wheel trailbike use will be encouraged on designated routes. Helicopter assisted skiing will be permitted. Trails will be constructed, reconstructed and maintained to access special features, classified areas, recreation management emphasis areas or to enhance developed site opportunities. Trails will be maintained to a level appropriate to the target user group.

New developed sites, existing site expansion and facilities outside developed sites will only be provided to maintain or enhance recreation opportunities or meet recreational use demands.

Wildlife habitat improvements consistent with the management emphasis will be allowed.

Domestic livestock grazing will not be permitted.

Denial of Federal Regulatory Commission applications which are inconsistent with visual and recreation objectives will be recommended. Rights-of-way will not be granted, except reasonable access will be provided to valid mineral claims and/or leases. Route selection will retain scenic values. The existing mineral withdrawal will be retained.

All wildfires will be confined. Exceptions to the confinement fire suppression strategy will be to contain and/or control wildfires which threaten public safety, capital investments or enter areas with a different fire management direction.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The Visual Quality Objective shall be Retention. Exceptions are permitted for treatment of insects and/or disease as allowed under this strategy.<br>Vegetative management plans shall be completed for all developed sites. Vegetative management may include tree removal, thinning and other cultural activities. |
| Facility and Site Management | All facilities shall be maintained to standard. |
| Use Administration | 2-wheel trailbike use shall be encouraged on designated routes.<br>Helicopter assisted skiing shall be permitted. |
| Trail Operation and Maintenance | Some trails shall be designated closed to horse use.<br>Existing trails necessary as access to special features, classified areas, recreation management emphasis areas or to enhance developed site opportunities shall be operated and maintained to the level appropriate to the target user group. Unnecessary trails shall be obliterated. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Facility and Site Reconstruction and Construction | Reconstruction of existing sites and facilities outside developed sites and construction of new sites and facilities outside developed sites shall only be accomplished to meet recreation use demands or to maintain or enhance recreation opportunities.<br>Approved design criteria and site plans shall be required for all new site construction, existing site expansion and major site upgrading.<br>All new site construction, existing site expansion and major site upgrading shall provide for the needs of the handicapped. |
| Trail Reconstruction | Trails shall be reconstructed to a level appropriate for the target user group. |
| Trail Construction | New trails may be constructed to access special features, classified areas, recreation management emphasis areas or to enhance developed site opportunities. |
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Wildlife habitat improvements consistent with visual objectives shall be allowed. |
| RANGE | |
| Range Planning | Domestic livestock grazing shall not be permitted. Recreation livestock grazing shall be permitted. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| TIMBER | |
| Timber Resource Management Planning and Inventories | Scheduled timber harvest shall not be permitted. Non-scheduled harvest (including firewood cutting shall only be permitted to enhance recreation and scenic opportunities or to accomplish vegetative management objectives in developed sites.<br>Fuelwood gathering shall be permitted for recreational activities and shall be limited to dead and down material. |
| MINERALS | |
| Processing of Exploration Applications | Mineral exploration proposals should meet the visual quality objective of retention, to the extent practicable. |
| LANDS | |
| Special Use Management (Non-Recreation) | Utility structures shall not be permitted unless a FERC permit is granted. Utility structures shall be consistent with the visual or recreation objective.<br>Signing, structures and highway improvement needs shall be coordinated with the State Department of Transportation. |
| Right-of-Way Grants | Rights-of-way shall not be granted, except reasonable access shall be provided to valid mineral claims and/or leases. |
| Federal Energy Regulatory Commission License and Permits | All applications inconsistent with the visual and recreation objectives shall be recommended for denial. |
| Withdrawals, Modifications and Revocations | The existing withdrawal from mineral entry shall be retained. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Road Operation and Maintenance | Local roads needed for recreational activities shall be reconstructed and/or operated and maintained to encourage highway vehicles. All other roads shall be evaluated and inactivated as feasible. |
| Local Road Construction | New roads shall not be constructed except where necessary to enhance recreation opportunities or to provide reasonable access to valid claims and/or leases. Route selections shall retain scenic values. |
| PROTECTION | |
| Fire Suppression Strategy | All wildfires shall be confined, except that wildfires which threaten public safety, capital investments or to enter areas with different fire management direction shall be contained and/or controlled.<br>Minimum impact suppression guidelines shall be used when containment and/or control becomes necessary. |
| Fuel Management Inventory and Fuels Treatment | Prescribed fire may be used to accomplish the management objectives of this strategy.<br>Management activity created slash shall be treated to meet scenic/visual objectives and to prevent unnatural fire hazard and/or fire behavior. |
| Forest Pest Management - Suppression and Prevention | Suppression may be allowed where insects and disease would adversely affect achieving the resource emphasis in the area. |

## PRESCRIPTION 8

GOAL STATEMENT: Natural features will be preserved in as undisturbed state as possible for scientific and educational purposes.

DESCRIPTION: This applies to the Wolf Creek Research Natural Area and the proposed Tiffany and Maple Mountain Research Natural Areas.

DESIRED FUTURE CONDITION: Research Natural Areas (RNAs) will contain either examples of typical natural ecosystems or unique kinds of vegetation, animals, and land which are reserved for scientific and educational use. RNA's should provide adequate field laboratories for ecological, environmental and land management research for Planning Area 2 (Okanogan, Colville and Wenatchee National Forests). These tracts will allow natural processes to continue and natural features will be preserved.

The specific purposes of each RNA is:

Wolf Creek - bitterbrush/bunchgrass cell.

Tiffany Mountain area - Engelmann spruce/subalpine forest; subalpine larch forest; alpine community mosaic; oligotrophic lake; permanent pond and vernal pond.

Maple Mountain area - Douglas-fir/pinegrass, including bearberry phase; Douglas-fir/snowberry community; Douglas-fir/pinebark community; typical western larch forest; subalpine fir/Oregon boxwood community; Idaho fescue - *Erigonum* openings in a forest area and stream drainages with a mixed coniferous forest.

Establishment reports will be developed for Tiffany and Maple Mountain RNAs that incorporate practices and management direction found in the following standards and guidelines.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Research Natural Areas | The guiding principle is "preservation." Logging activities including salvage of dead or diseased trees is prohibited. Grazing is permitted. Physical improvements are generally not allowed except those considered essential to suitable research or educational uses. Boundary fences may be necessary. Wildfires are extinguished as quickly as possible and no post-fire activity such as hazard reduction or revegetation is allowed. Prescribed underburning when used as a manipulative treatment for maintenance of some natural feature may be permitted with proper approval (from PNW Experiment Station). Public use of any concentration will be discouraged to prevent modification of the natural environment. Hunting, fishing and trapping is generally permitted. |
| RECREATION | |
| Use Administration | Recreation activities compatible with RNA objectives may be allowed. Specifically for the proposed Tiffany RNA, established recreational opportunities will continue. |
| Trail Construction, Reconstruction, Maintenance and Operation | Existing trails may be maintained and reconstructed. Construction will be limited to relocation of existing trails. |
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Hunting, fishing and trapping are generally permitted. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RANGE | |
| Range Resource Planning and Inventory | Grazing is not permitted on the existing Wolf Creek RNA. Grazing will continue to be permitted on the proposed Tiffany RNA, but will be re-evaluated when the current permittee retires or releases the permit. Grazing may be permitted on the Maple Mountain RNA, depending on management direction in the establishment report. |
| Range Non-structural and Structural Improvements and Maintenance | New physical improvements are generally not allowed except those considered essential to proper research or educational uses. Boundary fences may be necessary. Maintenance of existing structures where grazing is permitted will occur. |
| Noxious Weeds | Noxious weed control programs will not be carried out except where the infestation threatens adjacent areas or will drastically alter natural ecological processes within the tract. |
| TIMBER | |
| Timber Resource Management and Inventories | Scheduled and non-scheduled timber harvest will not occur. |
| FACILITIES | |
| Transportation System Planning, Construction, Operation and Maintenance | Road construction will not occur. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| PROTECTION | |
| Fire Suppression Strategy | Wolf Creek - Control all wildfires at 10 acres or less. Exceptions to the 10 acre control objective shall be for containment in fire tolerant stands at Fire Intensity Level 2 or lower.<br>Tiffany Mountain - Confine all fires. Contain or control wildfires that threaten resources, capital investments or enter areas with a different fire management prescription. When containment or contol action is required: (1) use minimum impact suppression strategy when practicable, (2) use indirect attack techniques such as natural fuelbreaks, changes in vegetative type and topography, whenever possible, and (3) minimize disturbances resulting from all phases and types of suppression.<br>Maple Mountain - Control all wildfires at 10 acres or less. Exception to the 10 acre control objective would be for containment in fire tolerant stands at Fire Intensity Level 2 or lower. |
| Fuels Treatment | As a general statement, the following applies to all RNAs with respect to the use of prescribed fire:<br>Maintenance of the identified natural features that warranted the establishment of the RNA may include the use of prescribed fire. However, no program use of prescribed fire will be permitted until the completion of the Establishment Report which must specifically identify the need to use prescribed fire for the maintenance of the Research Natural Area attributes. |
| Pest Management, Detection and Suppression | Insect, disease or wild animal control programs will not be carried out except where the infestation of animal damage threatens adjacent area or will drastically alter natural ecological processes within the tract. |

# PRESCRIPTION 9

**GOAL STATEMENT:** Manage deer winter range and fawning habitats to provide conditions which can sustain optimal numbers of deer indefinately, without degrading habitat characteristics such as forage, cover and soil.

**DESCRIPTION:** This applies to Management Area 9.

**DESIRED FUTURE CONDITION:**

1. *Vegetation*

Harvest units (clearcut, seed tree, shelterwood, partial cut, intermediate and timber stand improvement) will generally be 100 acres or less in size in deer winter range. Harvest units in fawning areas will generally be 5 acres or less in size. Even-aged management will be practiced in stands capable of producing 20 cubic feet per acre CMAI. Both even- aged and uneven-aged methods will be applied in stands not capable of producing 20 cubic feet per acre CMAI.

Essential cover types that will be provided in deer winter range are: (a) Snow intercept thermal (SIT) - to reduce the energy expense due to movement and temperature regulation by deer, and to provide forage during periods of deep snow (18"+); (b) Winter thermal (WT) - to reduce the energy expense of regulating body temperature (to conserve body heat); (c) Hiding - to provide security from predators and human harassment.

Optimal amounts of cover are as follows:

Amounts/Ratios

| Deer Winter Range | East of Okanogan River | Methow and Other |
|---|---|---|
| Snow Intercept Thermal Cover | 30% | 20% |
| Winter Thermal Cover | 10% | 15% |
| Hiding Cover (on winter range) | 20% | 5% |
| Total Cover Amounts | 60% | 40% |

Manage for cover unit size and other conditions described in Timber/Deer Coordination Report on Task I (Okanogan National Forest memo dated October 25, 1983). In fawning areas, provide cover for security and shade near water and succulent vegetation. Manage for a patchy distribution of 1 to 5 acre size blocks of security cover (2 to 6 feet tall) and shade cover on 25 to 50 percent of the area.

Forage such as shrubs, grasses, forbs and lichens will be managed in combination with cover types to meet winter range goal.

In both deer winter range and fawning areas, wildlife trees (including snags) will be provided to support 80% or more of maximum potential woodpecker populations.

Uncharred woody debris, which includes both timber sale activity slash and natural forest debris, will be retained as necessary to meet the Forestwide Standards and Guidelines. Hardwood types will be represented and perpetuated along with conifer management. Acceptable tree height at which openings no longer exist is 6 feet. Clearcuts and shelterwood entries should be less than 40 acres and 100 acres, respectively. Cover for other wildlife species will be provided by applying the above cover conditions.

2. Access - Open road densities will be less than 2 miles per square mile. In fawning areas, disturbance from concentrations of humans and livestock should be minimized during June, when most fawning occurs, and motorized vehicles will be prohibited, except where designated open. Cross-country ski trails and snowmobiling will be prohibited, with some through route exceptions.

Motorized vehicle access will be restricted where timber management occurs, generally prohibited during winter and limited in fawning areas during June.

Indicator Species

The management indicator species is the mule deer.

<table>
<tr><th>ACTIVITY</th><th>STANDARDS AND GUIDELINES</th></tr>
<tr><td>RECREATION</td><td></td></tr>
<tr><td>Recreation Planning</td><td>The Visual Quality Objective shall be modification in sensitivity level 1 road and trail corridors and maximum modification in all other areas.</td></tr>
<tr><td>FISH AND WILDLIFE</td><td></td></tr>
<tr><td>Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration</td><td>Manage all identified deer winter range for the following, where possible:
<table>
<tr><th>Winter Range Cover</th><th>East of the Okanogan R.</th><th>Methow & other</th></tr>
<tr><td>Snow Intercept Thermal</td><td>30%</td><td>20%</td></tr>
<tr><td>Winter Thermal</td><td>10%</td><td>15%</td></tr>
<tr><td>Hiding</td><td>20%</td><td>5%</td></tr>
<tr><td>Total:</td><td>60%</td><td>40%</td></tr>
</table>
Where potential is not present, manage to approach these percentages as closely as possible.<br>
In mixed conifer stands, snags shall be provided for at least 80% of potential woodpecker population size on a 320-acre basis. Where potential is not present on forested lands, manage to approach this percentage as closely as possible.</td></tr>
<tr><td>Non-structural Habitat Improvement</td><td>Non-structural improvements should be implemented where needed. Seeding, planting, prescribed burning, release thinning and harvesting shall be used as needed to improve or increase browse and other forage</td></tr>
</table>

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | or cover for deer. Examples include prescribed fire during times of high soil moisture or pruning during the dormant season to stimulate new growth of bitterbrush. Transplanting bare root or container stock or bitterbrush, serviceberry, chokecherry or vaccinium in areas of disturbed soil, or seeding of forbs such as clover to enhance forage opportunities are other examples. |
| Structural Habitat Improvement and Maintenance | Structural improvements and maintenance should be implemented where needed. Nest and denning structures, water developments, fencing and access management shall be built and maintained to benefit wildlife. Examples include installing nest boxes for cavity dwellers where snags are lacking, water catchments where water sources dry up in late summer, fencing to temporarily protect aspen regeneration or permanently protect portions of riparian habitat, and road management to protect fawning and winter ranges. |
| RANGE | |
| Range Resource Planning and Inventory | When practical, range resource planning should use an intensive (Level D) system to provide key components of wildlife habitat (i.e. winter range browse shall be protected from grazing). Wildlife habitat values shall be maintained or increased.<br>50 percent of the above the ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 50 percent of the annual grass production should be for livestock and 50 percent should be reserved for wildlife. 10 percent of the annual growth of browse should be for livestock and 90 percent should be reserved for wildlife. These figures may vary depending on specific site needs and the overall intent of the management area. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to comply with the needs of wildlife. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Scheduled and non-scheduled timber harvests shall be used to perpetuate deer habitat.<br>Encourage use of slash generated by logging and other silvicultural activities for fuelwood to the extent practical, and eliminate or prohibit such use where necessary. |
| Regeneration Harvests | Harvest shall provide the conditions needed for deer.<br>Even-aged management shall be practiced in the Moist Productive, Dry Productive and Lodgepole Pine working groups.<br>A created opening for wildlife management purposes is defined as an area where conifer regeneration is less than 6 feet tall following clearcutting, seed tree cutting or overstory removal cutting.<br>Rotation length shall be based on meeting structural needs of deer cover.<br>The time frame between seed cut and harvest final removal cut of shelterwoods and seed trees should be 7 to 14 years.<br>Final overstory removal cuts from existing shelterwoods should be accomplished during the first decade of the Forest Plan.<br>Provide green tree replacements for snags as necessary to meet 80 percent potential woodpecker population size. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Intermediate Harvests | Harvest shall provide the conditions needed for deer.<br>The size of intermediate harvest units shall be constrained by the need to provide the cover needs for deer. |
| Reforestation | Reforestation shall occur to provide habitat conditions for deer.<br>Stands to be managed for cover should not contain more than 10% western larch. |
| Timber Stand Improvement | Precommercial thinning may be prescribed to provide habitat conditions for deer. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be restricted when necessary to protect roads, soil, water, deer winter range and fawning areas.<br>To protect deer during winter, operations should be prohibited January through March. Operating season for logging and post sale activities shall be coordinated with recreation activities conducted under agreement or special use permit. Logging and post sale operations shall be limited to protect fawning during June. |
| FACILITIES | |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and management shall conform with the needs of wildlife. Fish passage up and down streams shall be unobstructed.<br>Generally, commercial hauling on arterials and collectors should take precedence over recreation traffic. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | On local roads, public access shall be discouraged or prohibited during periods of commercial hauling. High clearance vehicles should be accepted during post sale activities. All motorized traffic should be discouraged or eliminated after post sale activities.<br>To limit wildlife harassment, roads open to motorized vehicles shall be at a density less than 2 miles per square mile (on a management area basis), except for administrative use, permits and contracts.<br>Access by motorized vehicles shall be prohibited January through March, except where designated open. Winter haul shall be decided on a case-by-case basis. Access by motorized vehicles shall be prohibited in June, except where designated open. |
| PROTECTION |  |
| Fire Suppression Strategy | All wildfires should be controlled at 30 acres or less from May 1 to November 1. All wildfires of intensity level 2 or less should be contained at 100 acres or less from February 1 to May 1 in fire tolerant stands. All wildfires of fire intensity level 3 or above should be controlled to protect bitterbrush (May through November), crown cover (thermal and hiding), habitat improvements and old growth stands. Minimize loss of snags and large diameter logs (+20" diameter) during "mop-up" operations. |
| Fuel Management Inventory and Fuels Treatment | Fuels treatment, including the use of prescribed fire, shall provide, where practicable, for the retention of key wildlife habitat (i.e. cover, bitter brush, snags and down logs).<br>Treat fuels to preclude wildfires at or above Fire Intensity Level 3.<br>Schedule activities so as not to unduly disturb wildlife use, access and movement. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Most logs retained for wildlife habitat (see Forest-wide Standards and Guidelines) should be uncharred.<br>Do not prescribe fuel treatment levels to dispose of all activity or natural fuels.<br>Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |
| Forest Pest Management - Suppression, Detection and Prevention | Forest pest suppression and prevention shall be implemented to protect key components of wildlife habitat (i.e. healthy, fast-growing vegetation is necessary to perpetuate forage, cover, wildlife trees and future snags).<br>Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur if no controls are applied. Use principles of integrated pest management to select suppression strategies.<br>Utilize Integrated Pest Management (IPM) strategies to prevent unacceptable damage and meet resource objectives. |

## PRESCRIPTION 10

**GOAL STATEMENT:** Optimize habitat condition and perpetuate a healthy mountain goat population.

**DESCRIPTION:** This applies to Management Area 10, mountain goat habitat.

**DESIRED FUTURE CONDITION:**

1. Vegetation

   Essential cover types and forage will be maintained or managed to the extent possible in these rugged locations. Livestock control and prescribed fire will be the primary means of vegetative manipulation, and timber management may be allowed on a non-scheduled basis where mountain goats would be benefitted. Wildlife trees (including snags) will be provided to support 80% or more of maximum potential woodpecker populations.

2. Access

   Human disturbance will be minimized. Recreation special use permits will not be authorized for helicopter flights over or landing in areas where goats would be disturbed. Motorized travel will be prohibited, except where designated open.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The Visual Quality Objective shall be modification in sensitivity level 1 road and trail corridors and maximum modification in all other areas outside the North Cascades Scenic Highway. |
| Facility and Site Reconstruction | No expansion of existing facilities. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Facility and Site Construction | No new facilities. |
| Use Administration | Recreation special use permits shall not be authorized for helicopter flights over or landing in areas where goats will be disturbed.<br>Motorized recreation traffic shall be prohibited, except where designated open. |
| Trail Reconstruction | Trail reconstruction shall be coordinated with the needs of wildlife (i.e. concentrated human activity in kidding areas shall be avoided). |
| Trail Construction | New trail access shall not be acceptable. |
| Trail System Maintenance and Operation | Maintenance shall be coordinated with the needs of wildlife (i.e. concentrated human activity in kidding areas shall be avoided). |
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Project planning and implementation shall be directed primarily at maintenance of existing cover and forage values. Vegetative manipulation by fire or timber management shall occur only after careful study of the habitat in relation to seasonal habits and needs of mountain goats in specific locations. Probable benefits to mountain goats must be assured and justified on a case-by-case basis.<br>In mixed conifer stands, snags shall be provided for at least 80% of potential woodpecker population size on a 320-acre basis. When potential is not present on forested lands, manage to approach this percentage as closely as possible. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Non-structural Habitat Improvement | Prescribed fire, release thinning, harvesting and treatment of openings and edges are potentially feasible activities to manipulate vegetation if the need is justified. |
| RANGE | |
| Range Resource Planning and Inventory | Livestock grazing in goat habitat should be avoided. Wildlife habitat values shall be maintained or increased. |
| Range Non-Structural and Structural Improvements and Maintenance | In order to discourage livestock use, vegetative management and maintenance (i.e. revegetation, plant control and forage improvement) shall not occur. |
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to comply with the needs of wildlife. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Non-scheduled timber management activities is permitted on a case-by-case basis on suitable forest lands where mountain goats shall be benefited. Helicopter logging shall not be permitted, except during times and in locations where goats shall not be adversely disturbed.<br>Activities shall not be permitted during kidding and wintering seasons.<br>Eliminate or prohibit the use of natural or created slash for fuelwood. |
| MINERALS AND GEOLOGY | |
| Contests, Hearings, and Appeals; Reserved and Outstanding Rights; Surface Environment and Mining Research | Exploration activities shall occur outside the kidding and winter seasons. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and operations shall conform with the needs of wildlife.<br>Motorized traffic shall be prohibited, except where designated open. |
| PROTECTION | |
| Fire Suppression Strategy | Confine all wildfires.<br>Contain or control wildfires if they threaten resources, capital investments or enter areas with a different fire management prescription, or are human-caused fires within designated wilderness. |
| Fuel Management Inventory and Fuels Treatment | Fuels treatment, including the use of prescribed fire, shall provide, where practicable, for the retention of key wildlife habitat (i.e. cover, bitter brush, snags and down logs).<br>Use prescribed fire to meet land management objective outside of wilderness. Treat activity fuels to reduce risk to investments and the public. Determine treatment levels on a case-by-case basis. Treatment levels must provide reasonable assurance that high intensity crown fires can be controlled within 1/4 mile of major travel routes and timber producing areas.<br>Most logs retained for wildlife habitat (see Forestwide Standards and Guidelines) should be uncharred.<br>Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Forest Pest Management - Suppression | Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur. if no controls are applied. Use principles of integrated pest management to select suppression strategies. |
| Forest Pest Management - Prevention | Utilize Integrated Pest Management (IPM) strategies to prevent unacceptable damage and meet resource objectives. |

# PRESCRIPTION 11

**GOAL STATEMENT:** Manage bighorn sheep habitat to optimize habitat conditions and perpetuate a healthy population.

**DESCRIPTION:** This applies to Management Area 11 on the west side of Mt. Hull (see inventory map) where sheep reside yearlong.

**DESIRED FUTURE CONDITION:**

1. Vegetation

Harvest units (clearcut, seed tree, shelterwood, partial cut, intermediate and timber stand improvement) will generally be 40 acres or less in size and 1200 feet or less in width. Even-aged management will be practiced in stands capable of producing 20 cubic feet per acre CMAI. Both even-aged and uneven-aged methods will be applied in stands not capable of producing 20 cubic feet per acre CMAI.

Essential cover types that will be provided in bighorn sheep range are: (a) Snow intercept thermal (SIT) - to reduce the energy expense due to movement and temperature regulation by sheep, and to provide forage during periods of deep snow (18"+), (b) Winter thermal (WT) - to reduce the energy expense of regulating body temperature (to conserve body heat), and (c) Hiding - to provide security from predators and human harassment.

Manage all identified bighorn sheep habitat for the following, where possible:

Amounts/Ratios

| | Bighorn Sheep Range |
|---|---|
| Snow Intercept Thermal Cover | 20% |
| Winter Thermal Cover | 15% |
| Hiding Cover (on winter range) | 5% |
| Total Cover Amounts | 40% |

Where potential is not present, manage to approach these percentages as closely as possible.

Manage for cover unit size and other conditions described in Timber/Deer Coordination Report (Okanogan National Forest memo dated October 25, 1983).

Forage such as shrubs, grasses, forbs and lichens will be managed in combination with cover types to meet winter range goal.

In mixed conifer stands, wildlife trees (including snags) will be provided to support 80% or more of maximum potential woodpecker populations. Uncharred woody debris, which includes both timber sale activity slash and natural forest debris, will be retained as necessary to meet the Forestwide Standards and Guidelines. Hardwood types will be represented and perpetuated along with conifer management. Acceptable tree height at which openings no longer exist is 6 feet. Cover for other wildlife species will be provided by applying the above cover conditions.

2. Access

Motorized travel will be confined to designated routes. Winter logging will be decided on a case-by-case basis.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The Visual Quality Objective shall be modification in sensitivity level 1 road and trail corridors and maximum modification in in all other areas. |
| Use Administration | Motorized travel shall be confined to designated routes. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Project planning and implementation shall be directed primarily at maintenance and improvement of cover and forage values. Vegetative manipulation by timber or fire shall occur only after careful study of the habitat in relation to seasonal habits and needs of bighorn sheep.<br>Manage all identified bighorn sheep habitat for the following, where possible:<br>Snow Intercept Thermal 20%<br>Winter Thermal 15%<br>Hiding 5%<br>Total: 40%<br>Where potential is not present, manage to approach these percentages as closely as possible.<br>In mixed conifer stands, snags shall be provided for at least 80% of potential woodpecker population size on a 320-acre basis. When potential is not present on forested lands, manage to approach this percentage as closely as possible. |
| Non-structural Habitat Improvement | Non-structural improvements should be implemented where needed. Seeding, planting, prescribed burning, release thinning and harvesting should be used as needed to improve or increase browse and other forage or cover for bighorn sheep. Examples include prescribed fire or pruning to stimulate tall shrubs such as chokecherry and serviceberry. |
| Structural Habitat Improvement and Maintenance | Structural improvements and maintenance should be implemented where needed. Nest and denning structures, water developments, fencing and access management shall be built and maintained to benefit wildlife. Examples include installing nest boxes for cavity dwellers where snags are lacking, water catchments where water sources dry up |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | in late summer, fencing to temporarily protect aspen regeneration or permanently protect portions of riparian habitat, and road management to protect sheep habitat. |
| RANGE |  |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 25% of the annual grass production should be for livestock use and 75% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to comply with the needs of wildlife.<br>Domestic sheep grazing shall not occur. |
| TIMBER |  |
| Timber Resource Management Planning and Inventories | Bighorn sheep habitat shall be perpetuated by scheduled or non-scheduled timber harvest.<br>Eliminate or prohibit the use of natural or created slash for fuelwood where necessary. |
| Regeneration Harvests | Harvest shall provide the conditions needed for bighorn sheep.<br>Even-aged management shall be practiced in the Dry Productive and Lodgepole Pine working groups.<br>A created opening for wildlife management purposes is defined as an area where conifer regeneration is less than 6 feet tall following clearcutting, seed tree cutting or overstory removal cutting. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Rotation length shall be based on providing sheep habitat. |
|  | The time frame between seed cut and harvest final removal cut of shelterwoods and seed trees should be 7 to 14 years. |
|  | Final overstory removal cuts from existing shelterwoods should be accomplished during the first decade of the Forest Plan. |
|  | Provide green tree replacements for snags as necessary to meet 80 percent potential woodpecker population size. |
| Intermediate Harvests | Harvest shall provide the conditions needed for bighorn sheep. |
| Reforestation | Reforestation shall occur to provide habitat conditions for sheep. |
|  | Stands to be managed for cover should contain no more than 10% western larch. |
| Timber Stand Improvement | Stand improvements may be prescribed to meet habitat structural definitions. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be restricted, except to protect roads, soil, water, bighorn sheep winter ranges and lambing areas. Operating season for logging and post sale operations shall be coordinated with recreation activities conducted under agreement or special use permit. To protect fawning (June), lambing (May), and deer during severe winters (January through March), the operating season may be restricted on deer winter range and fawning areas and lambing areas. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and management shall conform with the needs of wildlife.<br>Access by motorized vehicles shall be prohibited or eliminated year-round, except when and where designated open. Winter commercial hauling shall be decided on a case-by-case basis. |
| PROTECTION | |
| Fire Suppression Strategy | Control all wildfires at 30 acres or less from May 1 to November 1. Contain all wildfires of Fire Intensity Level 2 or less at 100 acres or less from February 1 to May 1 in fire tolerant stands. Control fires of Fire Intensity Level 3 or above. Protect crown cover (thermal and hiding), habitat improvements and old growth stands to the extent practicable. Minimize loss of snags and large diameter logs (+20" diameter) during "mop-up" operations. |
| Fuel Management Inventory and Fuels Treatment | Fuels treatment, including the use of prescribed fire, shall provide, where practicable, for the retention of key wildlife habitat (i.e. cover, bitter brush, snags and down logs).<br>Treatment fuels to preclude wildfires at or above Fire Intensity Level 3.<br>Schedule activities so as not to unduly disturb wildlife use, access and movement.<br>Most logs retained for wildlife habitat (see Forestwide Standards and Guidelines) should be uncharred.<br>Do not prescribe fuel treatment levels to dispose of all activity or natural fuels.<br>Utilize low intensity prescribed fires to enhance forage and browse species. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Forest Pest Management - Suppression and Prevention | Forest pest suppression and prevention shall be implemented to protect key components of wildlife habitat (i.e. healthy, fast-growing vegetation is necessary to perpetuate forage, cover, wildlife trees and future snags).<br>Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur if no controls are applied. Use principles of integrated pest management to select suppression strategies.<br>Utilize Integrated Pest Management (IPM) strategies to prevent unacceptable damage and meet resource objectives. |

## PRESCRIPTION 12

GOAL STATEMENT: Manage suitable forest lands to maximize production of merchantable wood fibre while achieving a high present net worth while providing and perpetuating a diverse mosaic of stand ages, conditions for the general benefit of all wildlife present and the specific needs of lynx.

DESCRIPTION: This applies to Management Area 12.

DESIRED FUTURE CONDITION:

Vegetation

Harvest units (clearcut, seed tree, shelterwood, partial cut, intermediate, and timber stand improvement) will generally be 40 acres or less in size, and 1200 feet or less in width. Even-aged management will be practiced in stands capable of producing 20 cubic feet per acre CMAI. Both even-aged and uneven-aged methods will be applied in stands not capable of producing 20 cubic feet per acre CMAI.

Specific conditions for lynx in lodgepole dominated (but including other associated species) sites are as follows: lodgepole will be perpetuated, not converted to other tree species. Different sized and shaped units of successional stages will be managed for. Maximum opening width should be 1200 feet and optimally should be 600 feet or less. Cover for seclusion and hunting (vegetation capable of hiding a standing adult lynx at 200 feet or less) should be connected by cover corridors in a mostly continuous manner. Cover unit size is 20 acres or more; cover corridor width is 300 feet or more; and cover canopy height is 6 feet or more. Cover amounts necessary are 50% minimally and 70% or more optimally per 160 acres of lodgepole type. Clearcuts should be designed to maintain cover corridors rather than disrupting corridors. Cover will be emphasized on major ridges and saddles of ridges.

Wildlife trees (including snags) will be provided to support 60% or more of potential woodpecker populations in mixed conifer inclusions. Lodgepole pine stands will be managed to improve future snag levels and attain at least 40% of maximum potential woodpecker populations, if possible. Uncharred woody debris, which includes both timber sale activity slash and natural forest debris, will be retained as necessary to meet the Forestwide Standards and Guidelines. Hardwood types will be represented and perpetuated along with conifer management. The height at which openings no longer exist is 6 feet. Clearcuts and shelterwood entries will be less than 40 acres and 100 acres, respectively.

### Access

Open road densities will be less than 2 miles per square mile. Snowmobiling will not be permitted, except on designated routes.

Roads will be planned, constructed and managed as follows:

(a) Minimize numbers of main access roads to aid law enforcement of State wildlife laws, especially to control illegal taking of lynx.

(b) Construct dead end roads rather than loop roads to aid law enforcement.

(c) Construct and maintain roads to minimum possible standards to discourage heavy use.

(d) Design road systems that can be gated or blocked in part or whole to reduce disturbance and aid law enforcement.

(e) Eliminate or block secondary access roads to reduce disturbance and aid law enforcement.

### Indicator Species

Management indicator species are lynx and three-toed woodpeckers.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The visual quality objective shall be modification in sensitivity level "1" road and trail corridors and maximum modification in all other areas. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Develop project prescriptions to achieve and maintain the conditions stated above.<br>Wildlife trees (including snags) shall be provided to support 60% or more of potential woodpecker populations in mixed conifer inclusions. Lodgepole pine stands shall be managed to improve future snag levels and attain at least 40% of maximum potential woodpecker populations, if possible. Manage snag levels on a 320-acre basis. |
| Non-structural Habitat Improvement | Non-structural improvements should be implemented when needed. Seeding, planting, prescribed burning, release thinning and harvesting shall be used as needed to improve or increase browse and other forage or cover for wildlife. |
| Structural Habitat Improvement and Maintenance | Improvements should be implemented and maintained where needed. Nest and denning structures, water developments, fencing and access management shall be built and maintained to benefit wildlife. Examples include installing nest boxes for cavity dwellers where snags are lacking, water catchments where water sources dry up in late summer, fencing to temporarily protect aspen regeneration or permanently protect portions of riparian habitat, and road and access management to protect lynx habitat during winter. |
| RANGE | |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 60% of the annual grass production should be for livestock use and 40% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to comply with the needs of wildlife. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Lynx habitat shall be perpetuated by scheduled and non-scheduled timber harvest.<br>To the extent practicable, fuelwood use of slash generated by logging and other silvicultural activities shall be encouraged. When practicable, encourage fuelwood use of non-merchantable live trees to accomplish silvicultural objectives. |
| Regeneration Harvests | Harvest shall provide the conditions needed for lynx.<br>Even-aged management shall be practiced in the Moist Productive, Dry Productive and Lodgepole Pine working groups.<br>A created opening for wildlife management purposes is defined as an area where conifer regeneration is less than 6 feet tall following clearcutting, seed tree cutting or overstory removal cutting.<br>The time frame between seed cut and harvest final removal cut of shelterwoods and seed trees should be 7 to 14 years.<br>Final overstory removal cuts from existing shelterwoods should be accomplished during the first decade of the Forest Plan. |
| Intermediate Harvests | Harvest shall provide the conditions needed for lynx. |
| Reforestation | Reforestation shall occur to provide habitat conditions described for lynx. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | If natural regeneration is not sufficient, lodgepole stands should be planted to lodgepole (i.e. not type converted to another species). |
| Timber Stand Improvement | TSI may be prescribed to provide the habitat conditions for lynx. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall be unrestricted except to protect roads, soil, water and wildlife resources. Operating season for logging and post sale activities shall be coordinated with recreation activities conducted under agreement or special use permit. To protect fawning (June), the operating season shall be decided on a case-by-case basis in fawning areas. |
| FACILITIES | |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and management shall conform with the needs of wildlife.<br>On local roads, public access shall be discouraged or prohibited during periods of commercial hauling. High clearance vehicles should be accepted during post sale activities and all other motorized traffic shall be discouraged or eliminated after post sale activities.<br>To limit wildlife harassment, roads open to motorized vehicles shall be at a density less than 2 miles per square mile (on a management area basis) following post sale activities.<br>Generally, commercial hauling on arterials and collectors should take precedence over recreation traffic. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| PROTECTION | |
| Fire Suppression Strategy | Control all fires at 10 acres or less.<br>Exception to the 10-acre control objective is for containment in fire tolerant stands at Fire Intensity Level 2 or lower.<br>Limit destructive burned acreage in stands under intensive management. |
| Fuel Management Inventory and Fuels Treatment | Fuels treatment, including the use of prescribed fire, shall provide, where practicable, for the retention of key wildlife habitat (i.e. cover, bitter brush, snags and down logs).<br>Treat fuels to a level that precludes fires at Fire Intensity Level 3 or above.<br>Fuels treatment, fuelbreaks and maintenance shall provide key components of wildlife habitat. Cover, snags and logs shall be protected to the extent practicable.<br>Do not prescribe fuel treatment levels to dispose of all activitiy fuels.<br>Schedule activities so as not to unduly disturb wildlife use, access and movement.<br>Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |
| Forest Pest Management - Suppression and Prevention | Forest pest suppression and prevention shall be implemented to protect key components of wildlife habitat (i.e. healthy, fast-growing vegetation is necessary to perpetuate forage, cover, wildlife trees and future snags).<br>Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur if no controls are applied. Use principles of integrated pest management to select suppression strategies. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Utilize Integrated Pest Management (IPM) strategies to prevent unacceptable damage and meet resource objectives. |

## PRESCRIPTION 13

**GOAL STATEMENT:** Provide a diversity of good quality riparian and aquatic habitats for maximum, sustained use by all associated wildlife.

**DESCRIPTION:** This applies to areas of perennial or intermittent streams, areas of standing water and areas with a permanent or seasonal high water table, except those in Management Area 5. These zones have riparian vegetation requiring large amounts of available water year-round and seasonally. The width of riparian areas depends upon slope and vegetative cover, but as a minimum, it includes the area within 100 feet slope distance from the high water mark on each side of perennial streams, lakes or marshes.

**DESIRED FUTURE CONDITION:**

A. Vegetation - Harvest units (clearcut, seed tree, shelterwood, partial cut, intermediate and timber stand improvement) will generally be 300 feet or less in width on one side of a stream, or 200 feet or less in width on both sides of a stream. Complete canopy removal can be acceptable. Total stream length affected by timber harvest would be 15% or less per decade. In other riparian areas, such as areas with seasonally saturated soils, harvest or thinning entries will generally be 5 acres or less. Even-aged management will generally be practiced in stands capable of producing 20 cubic feet per acre CMAI. Uneven-aged management (primarily group selection) may be practiced in specific situations. In stands not capable of producing 20 cubic feet per acre CMAI both even-aged and uneven-aged management may be practiced.

Wildlife trees (including snags) should be provided to support 100% of maximum potential woodpecker populations. Untreated woody debris (slash) and uncharred, sound logs will be retained as necessary to maximize habitat potential. All ecoclass types and different vegetative conditions (seral stages), including old growth, would be represented. Structural habitat in perennial streams would be maintained or improved to produce fish (e.g. certain large woody debris can be left to help form pools). Amount of edge contrast (ecotones) will be maximized where timber management occurs. Acceptable tree height at which openings no longer exist is 6 feet. Cover for many wildlife species will be provided and the amounts, ratios and characteristics for summer thermal, hiding and fawning cover types will be applied to achieve this (Timber/Deer Coordination Report, Okanogan National Forest, October 25, 1983). Generally, wildlife travel corridors that provide cover will be maintained along the entire length of riparian zones, on at least one side of the drainage. Corridor interruptions (affecting both sides of the drainage) will be 200 feet or less across.

Streambanks would be maintained in stable condition; erosion and sediment into water bodies will be minimized; and State and Federal water quality standards will be met. Hardwood regeneration will be protected (at least 75%) from grazing and concentration of livestock would be avoided.

B. Access - New roads and access will be constructed only when necessary to cross drainages. Fish passage up and down streams will be unobstructed.

Indicator Species

Management indicator species are ruffed grouse, and anadromous and resident fish.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The Visual Quality Objective shall be modification in sensitivity level "1" road and trail corridors and maximum modification in all other areas. |
| Trail System Operation, Maintenance, Reconstruction and Construction | Trail operation, maintenance, reconstruction and construction shall be coordinated with the needs of wildlife (i.e. concentrated human activity in areas of concentrated wildlife use shall be avoided). |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Develop project prescriptions to achieve and maintain the conditions stated above. Any management within riparian areas shall be for the express purpose of habitat maintenance or improvement.<br>Minimum cover amounts shall be 40% (20% hiding and 20% summer thermal cover) in riparian areas.<br>In mixed conifer stands, snags should be provided at 100% of potential woodpecker population size on a 320 acre basis. Where potential is not present on forested lands, manage to approach this percentage as closely as possible.<br>Where it can be effective, improve streambank vegetation where streambanks have become unstable or cover does not meet the Forest Plan fish habitat objective, as a result of management activities. |
| Non-structural Habitat Improvement | Non-structural improvements should be implemented where needed. Planting willow shoots to stabilize streambanks, harvesting conifers to release aspen, regenerating mature aspen clones, and treating edges for increased ecotones are possible vegetative treatments.<br>Spawning and rearing habitat improvement, stream barrier removal, fish population and aquatic plant control, and fish habitat fertilization are possible aquatic treatments. These activities shall be closely coordinated with the Washington State Department of Fish and Game. |
| Structural Habitat Improvement and Maintenance | Structural improvements and maintenance should be implemented where needed. Pothole blasting for waterfowl, nest boxes for cavity dwellers, road management to protect areas from overfishing, streambank stabilization with gabions, screening fish from |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | irrigation ditches, culvert replacement for upstream fish movement and fencing to protect hardwood regeneration are examples of appropriate structures. |
| RANGE | |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 50% of the annual grass production should be for livestock use and 50% should be reserved for wildlife. 10% of the annual growth of browse should be for livestock use and 90% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area.<br>Hardwood stands shall be managed to perpetuate hardwoods. Utilize not more than 25 percent of hardwood suckers and shoots. Concentrations of livestock shall be avoided.<br>Where practical, range resource planning and management should use an intensive (Level D) system to provide key components of wildlife habitat. Wildlife values shall be maintained or increased. |
| Range Non-structural Improvements - Maintenance | Vegetation management and maintenance (e.g. revegetation, plant control and forage improvements) shall not occur in order to discourage livestock use. |
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to comply with the needs of wildlife. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Scheduled and non-scheduled timber harvests shall be designed to perpetuate riparian/ aquatic habitat. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Accept the use of slash generated by logging and other silvicultural activities for fuelwood. |
| Regeneration Harvests | Harvest within riparian areas shall improve or maintain habitat. Harvest units should be 300 feet or less along streams, ponds and lakes. Complete canopy removal can be acceptable. The total length of stream affected by timber harvest should be 15% or less per decade. |
|  | Even-aged management should generally be practiced in Moist Productive and Lodgepole Pine working groups. Uneven-aged methods (primarily group selection) may be applied in specific stands where they best meet management direction in the Moist Productive working group. Group selection is the only uneven-aged method that may be applied in the Lodgepole Pine working group. |
|  | A created opening for wildlife management purposes is defined as an area where conifer regeneration is less than 6 feet tall following clearcutting, seed tree cutting or overstory removal cutting. |
|  | Rotation length shall be based on meeting structural needs of riparian/aquatic habitat. |
|  | Provide green tree replacements for snags as necessary to meet 100 percent potential woodpecker population size. |
|  | Retain trees where necessary to maintain streambank stability. |
| Intermediate Harvests | Harvest within riparian areas shall improve or maintain habitat. |
| Reforestation | Reforestation shall occur to provide habitat conditions described in the summary statement above. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | To prevent site degradation and sedimentation, soil disturbance should occur on less than 30% of the area, and soil compaction on less than 5%. |
| Timber Stand Improvement | Timber stand improvement may be prescribed to provide riparian/aquatic habitat conditions. |
| Timber Sale Preparation | Operating season for logging and post sale operations shall restricted when necessary to protect roads, soil, water and wildlife resources. The operating season for logging and post sale activities shall be coordinated with recreation activities conducted under agreement or special use permit. |
| FACILITIES |  |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and management should conform with the needs of wildlife. Fish passage up and down streams should be unobstructed.<br>New roads and access shall be constructed only when necessary to cross drainages. |
| PROTECTION |  |
| Fire Suppression Strategy | All wildfires should be controlled at 10 acres or less. Exception to the 10-acre control objective is for containment in fire tolerant stands at Fire Intensity Level 2 or lower.<br>Limit destructive burned acreage in stands under intensive management. |
| Fuel Management Inventory and Fuels Treatment | Fuels treatment, including the use of prescribed fire, shall provide, where practicable, for the retention of of key wildlife habitat (i.e. cover, bitter brush, snags and down logs). |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | The use of prescribed fire shall retain key components of wildlife habitat (i.e. forage, snags and logs shall be protected to the extent practicable).<br>Prescribe fuel treatment to protect stands under intensive management. To the extent practicable: (1) maintain and enhance usable forage, (2) maintain animal travel routes, (3) utilize fuel treatment methods which minimize cost, site disturbance, loss of the residual stand and the deterioration of soil productivity, and (4) allow the use of prescribed fire in fire tolerant stands. |
| Forest Pest Management - Suppression and Prevention | Forest pest suppression and prevention shall be implemented to protect key components of wildlife habitat (i.e. healthy, fast-growing vegetation is necessary to perpetuate forage, cover, wildlife trees and future snags).<br>Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur if no controls are applied. Use principles of integrated pest management to select suppression strategies.<br>Utilize Integrated Pest Management (IPM) strategies to prevent unacceptable damage and meet resource objectives. |

## PRESCRIPTION 14

GOAL STATEMENT: Provide a diversity of wildlife habitats with optimum distribution, and a sustained, even-flow of timber.

DESCRIPTION: This applies to Management Area 14.

DESIRED FUTURE CONDITION: Vegetation - Harvest units (clearcut, seed tree, shelterwood, partial cut, intermediate and timber stand improvement) will generally be 100 acres or less in size and 1200 feet or less in width. Even-aged management will be practiced in stands capable of producing 20 cubic feet per acre CMAI. Both even-aged and uneven-aged methods will be applied in stands not capable of producing 20 cubic feet per acre CMAI.

Wildlife trees (including snags) will be provided to support 60% or more of maximum potential woodpecker populations. Uncharred woody debris (slash) will be retained as necessary in the form of sound logs and slash accumulations. Hardwood types will be represented and perpetuated along with conifer management. Acceptable tree height at which openings no longer exist is 6 feet. Cover for many wildlife species will be provided over 40% of the area - the amounts, ratios and characteristics for summer thermal and hiding cover types will be applied to achieve this (Timber/ Deer Coordination Report, Okanogan National Forest, October 25, 1983). Cover for wildlife travel corridors will be provided as necessary.

Access - Open road densities will be less than 2 miles per square mile. Cross-country ski trails and snowmobiling will be limited on deer winter range and where winter logging occurs. Motorized vehicle access will be limited to avoid wildlife harassment and timber management conflicts as needed.

Indicator Species

Management indicator species include woodpeckers (10 species) and mule deer.

<table>
<tr><th>ACTIVITY</th><th>STANDARDS AND GUIDELINES</th></tr>
<tr><td>RECREATION</td><td></td></tr>
<tr><td>Recreation Planning</td><td><p>The visual quality objective shall be modification in all sensitivity level 1 road and trail corridors, and maximum modification in all other areas.</p><p>New areas of concentrated cross-country skiing and snowmobiling shall be avoided in winter range.</p></td></tr>
<tr><td>FISH AND WILDLIFE</td><td></td></tr>
<tr><td>Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration</td><td><p>Manage all identified deer winter range for the following, where possible:</p>
<table>
<tr><th>Winter Range Cover</th><th>East of the Okanogan R.</th><th>Methow & other</th></tr>
<tr><td>Snow Intercept Thermal</td><td>≥25%</td><td>≥15%</td></tr>
<tr><td>Winter Thermal</td><td>≥ 5%</td><td>≥15%</td></tr>
<tr><td>Hiding</td><td>≥15%</td><td>≥ 0%</td></tr>
<tr><td>Total:</td><td>≥45%</td><td>≥30%</td></tr>
</table>
<p>Where potential is not present, manage to approach these percentages as closely as possible.</p>
<p>Minimum cover amounts shall be 40% (20% hiding and 20% summer thermal cover) on non-winter range.</p>
<p>In mixed conifer stands, snags shall be provided for at least 60% of potential woodpecker population size on a 320-acre basis. Where potential is not present on forested lands, manage to approach this percentage as closely as possible.</p></td></tr>
</table>

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Non-structural Habitat Improvement | Non-structural improvements should be implemented as needed. Seeding, planting, prescribed burning, release thinning, harvesting openings and treating of edges to be used as needed to improve or maintain vegetation for wildlife. Harvesting conifers to release hardwood shrubs and trees, regenerating mature aspen clones and treating edges for increased ecotones are possible examples of treatment. |
| Structural Habitat Improvement and Maintenance | Structural improvements and maintenance should be implemented as needed. Nest boxes for cavity dwellers, guzzlers for deer and grouse, road management to protect areas from concentrated hunting or overfishing and fencing to protect regenerated aspen are examples of appropriate activities. |
| RANGE | |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 50% of the annual grass production should be for livestock use and 50% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to conform with the needs of wildlife. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Scheduled and non-scheduled timber harvests shall be used to perpetuate wildlife habitat. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | To the extent practicable, fuelwood use of slash generated by logging and other silvicultural activities shall be encouraged. When practicable, encourage fuelwood use of non-merchantable live trees to accomplish silvicultural objectives. |
| Regeneration Harvest | Harvest shall provide the conditions needed for wildlife.<br>Even-aged management shall be practiced in the Moist Productive, Dry Productive and Lodgepole Pine working groups.<br>A created opening for wildlife management purposes is defined as an area where conifer regeneration is less than 6 feet tall following clearcutting, seed tree cutting or overstory removal cutting.<br>The time frame between seed cut and harvest final removal cut of shelterwoods and seed trees should be 7 to 14 years.<br>Final overstory removal cuts from existing shelterwoods should be accomplished during the first decade of the Forest Plan.<br>Provide green tree replacements for snags as necessary to meet 60% of the potential woodpecker population size. |
| Intermediate Harvests | Harvest shall provide the conditions needed for wildlife. |
| Reforestation | Reforestation shall occur to provide habitat conditions for wildlife.<br>Stands to be managed for cover should not contain more than 10% western larch. |
| Timber Stand Improvement | Timber stand improvement may be prescribed to provide habitat conditions for wildlife. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Timber Sale Preparation | Operating season for logging and post sale operations shall be unrestricted except to protect roads, soil, water and wildlife resources. Operating season for logging and post sale activities shall be coordinated with recreation activities conducted under agreement or special use permit. To protect fawning (June) and deer during severe winters (January through March), the operating season shall be decided on a case-by-case basis in fawning areas and deer winter range. |
| FACILITIES | |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and management shall conform with the needs of wildlife.<br>To limit wildlife harassment, roads open to motorized vehicles shall be at a density less than 2 miles per square mile (on a management area basis), except for administrative use, permits and contracts.<br>Access by motorized vehicles shall be prohibited on deer winter range, January through March, except where designated open. Winter haul shall be decided on a case-by-case basis.<br>Generally, commercial hauling on arterials and collectors shall take priority over recreation traffic.<br>On local roads, public access shall be discouraged or prohibited during commercial hauling. High clearance vehicles should be accepted during post sale activities. All motorized traffic should be discouraged or eliminated following post sale activities. All motorized traffic shall be discouraged or eliminated after post sale activities. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| PROTECTION | |
| Fire Suppression Strategy | All wildfires should be controlled at 10 acres or less. Exception to the 10 acre control objective shall be for containment in fire tolerant stands at Fire Intensity Level 2 or lower.<br>Limit destructive burned acreage in stands under intensive management. |
| Fuels Management Inventory and Fuels Treatment | Prescribe level of fuel treatment to protect stands under intensive management. To the extent practicable: (1) utilize fuel treatment methods which minimize costs, site disturbance, loss of the residual stand and deterioration of site productivity, and (2) allow the use of prescribed fire in fire tolerant stands.<br>Treat fuels to preclude wildfires at fire intensity level 3 or above<br>Most logs retained for wildlife habitat (see Forest-wide Standards and Guidelines) should be uncharred.<br>Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |
| Forest Pest Management - Suppression and Prevention | Forest pest suppression and prevention shall be implemented to protect key components of wildlife habitat (i.e. healthy, fast-growing vegetation is necessary to perpetuate forage, cover, wildlife trees and future snags).<br>Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur if no controls are applied. Use principles of integrated pest management to select suppression strategies.<br>Utilize Integrated Pest Management (IPM) strategies to prevent unacceprable damage and meet resource objectives. |

## PRESCRIPTION 15a

STATEMENT: Provide a wilderness setting with no constructed trails.

DESCRIPTION: This strategy will be applied to those areas within existing wilderness outside grazing allotments.

DESIRED FUTURE CONDITION: Wilderness opportunities will be provided in areas characterized by a predominately unmodified natural environment of large size.

Users will have an extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through the application of outdoor skills in an environment that offers an extremely high degree of challenge and risk. Interaction between users will be very low and evidence of other users will be minimal. The area will be free from evidence of human-induced restrictions and controls.

Access will be confined to cross-country travel. Existing constructed trails will be obliterated.

All activities should conform with Region 6 guidelines and will follow the non-degradation policy.

Additional outfitter-guide permits will not be issued and existing permits will not be re-issued upon termination or expiration.

Use of fuelwood will be limited to dead and down material.

Mineral activity will be limited to valid claims and leases. The method of access will be that which creates the least lasting impacts on the wilderness resource while still meeting the needs of the claimant. Mineral operating plans will ensure that adverse effects are mitigated or corrected as soon as possible.

All lightning fires will be confined and all person-caused fires will be contained and/or controlled. The use of prescription fire is not a part of this strategy.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | Visual Quality Objective shall be preservation. |
| Trail Reconstruction and Construction | Existing trails shall not be reconstructed and new trails shall not be constructed. |
| Trail System Maintenance and Operation | Existing trails shall be obliterated. |
| WILDERNESS | |
| Wilderness Planning | One Implementation Schedule shall be completed per wilderness within 12 months of Forest Plan approval and shall be updated as needed annually. Each schedule shall contain as a minimum:<br>- specific action items needed to follow Forest Plan direction.<br>- prioritization of action items.<br>- forest or district responsibility.<br>- target dates for completion.<br>The wilderness resource and its use shall be administered and managed to protect the natural condition. |
| Wilderness Use Administration | All activities should conform with Region Six guidelines and shall follow the nondegradation policy.<br>Management of use shall utilize the following order of techniques: information services and public education, indirect management methods, area restrictions, mandatory permits, and closure to public use.<br>Data gathering should utilize the voluntary registration system at trailheads.<br>Additional outfitter-guide permits shall not be issued, and existing permits shall not be re-issued upon termination or expiration. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Fuelwood gathering shall be permitted for use on-site and shall be limited to dead and down material. Fuelwood gathering shall be restricted where use is in conflict with wilderness objectives.<br>Facilities and improvements for visitor use shall only be provided for protection of the wilderness resource and as a last resort only after trying education, other indirect management techniques or reasonable limitations on use.<br>All proposed use of motorized equipment, mechanical transport or aircraft shall be reviewed and decided on a case-by-case basis as per 2320.<br>Party size limits shall be any combination of people and recreation livestock not exceeding 12. |
| FISH AND WILDLIFE | |
| Wildlife Planning | In the Pasayten Wilderness, only those lakes approved in 1969 shall be aerial stocked. The fish stocking program for the Lake Chelan/Sawtooth Wilderness shall be determined within 1 year of Forest Plan approval. Barren water shall not be stocked.<br>Clearing of debris which impedes the movement of fish shall only occur on critical spawning essential for the propagation of fish. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Timber harvest shall not occur. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| **SOIL, WATER AND AIR** | |
| Water Resource Administration and Management | Existing water regulation structures may be maintained if in the public interest or under a valid existing right. |
| MINERALS | |
| Processing of Exploration Applications | Access to existing valid claims and/or leases shall be by methods which create the least lasting impact on the wilderness resource, while still meeting the needs of the claimant.<br>Where operating plans are required, they shall ensure that adverse effects are mitigated and/or corrected as soon as possible. |
| LANDS | |
| Special Uses Management (Non-Recreation) | Utility structures shall not be permitted.<br>Permanent communication facilities shall not be installed.<br>The U.S.G.S. cabin at Freezeout Creek shall be reviewed to determine the need for retaining. |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments eligible for wild and scenic rivers designation shall be protected (ref: Appendix G of DEIS). |
| PROTECTION | |
| Fire Suppression | Confine all lightning fires. Exceptions to the confinement fire policy will be to contain and/or control lightning fires that: |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | 1) threaten significant cultural resources and capital investments, or<br>2) has the potential to cross the U.S./Canadian border, or<br>3) the fire threatens to leave the wilderness and enter an area with a different management direction, or<br>4) off-site impacts (i.e. smoke, etc.) are unacceptable. |
| | When containment or control action is required: |
| | 1) apply approved wilderness suppression guidelines which minimize disturbances resulting from all phases and types of wildfire suppression;<br>2) use indirect attack which utilizes natural fuelbreaks, changes in vegetative type, weather and topography, wherever possible. |
| | Existing inventoried helispots shall not be improved or maintained and shall be allowed to revegetate naturally. |
| | RAWS units shall not be installed. |
| Fuel Management Inventory and Fuels Treatment | Prescribed fire shall not be used. |
| Forest Pest Management - Suppression | Insect or disease outbreaks shall not be artificially controlled unless it is necessary to protect timber or other valuable vegetation outside the wilderness. When control of insects is necesary, it shall be carried out by measures that have the least impact on the wilderness resource. |
| Forest Pest Management - Prevention | Pest populations shall be monitored to prevent spread to adjacent resource areas. |

# PRESCRIPTION 15b

GOAL STATEMENT: Provide a wilderness setting with limited access.

DESCRIPTION: This strategy will be applied to those areas within existing wilderness.

DESIRED FUTURE CONDITION: Wilderness opportunities will be provided in areas characterized by a predominantly unmodified environment of moderate to large size. Users will have an extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and self-reliance through application of outdoor skills in an environment that offers a high degree of challenge or risk. Interaction between users will be low, and evidence of other users will be minimal. Human-induced restrictions and controls, if present, will be subtle.

Constructed trail access will be limited to existing trails necessary to pass through the area and will be difficult to more difficult. Remaining trails will be obliterated.

All activities should conform with Region 6 guidelines and will follow the non-degradation policy.

Additional outfitter-guide permits will not be issued, and the current amount of priority use will be retained.

Use of fuelwood will be limited to dead and down material.

Domestic livestock grazing will continue on existing allotments. Facilities necessary to protect the range and/or wilderness resource, rather than to increase livestock numbers, will be permitted.

Mineral operating plans will ensure that adverse effects are mitigated or corrected as soon as possible.

All lightning fires will be confined and all person-caused fires will be contained and/or controlled. The use of prescription fire is not a part of this strategy.

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| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | Visual Quality Objective shall be preservation. |
| Trail Reconstruction and Construction | Reconstruction shall be limited to existing trails necessary to pass through the area. Construction shall be limited to relocation of existing trails necessary to pass through the area.<br>Newly constructed and reconstructed trails shall be located to minimize conflicts with wildlife and fish. |
| Trail Maintenance and Operation | Access trails necessary to pass through the area shall be maintained to a level appropriate to the target user group. Trails should generally be difficult to more difficult. Remaining trails shall be obliterated. |
| WILDERNESS | |
| Wilderness Planning | One Implementation Schedule shall be completed per wilderness within 12 months of Forest Plan approval and shall be updated as needed annually. Each schedule shall contain as a minimum:<br>- specific action items needed to follow Forest Plan direction.<br>- prioritization of action items.<br>- forest or district responsibility.<br>- target dates for completion. |
| Wilderness Use Administration | The wilderness resource and its use shall be administered and managed to protect the natural condition.<br>All use should conform with Region Six guidelines and shall follow the non-degradation policy. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | All proposed use of motorized equipment, mechanical transport or aircraft shall be reviewed and decided on a case-by-case basis as per 2320. |
| | Party size limits shall be any combination of people and recreation livestock not exceeding 12, except that larger parties may be authorized on a case-by-case basis. |
| | Management of use shall utilize the following order of techniques: information services and public education, indirect management methods, area restrictions, mandatory permits, and closure to public use. |
| | Data gathering should utilize the voluntary registration system at trailheads. |
| | Facilities and improvements for visitor use shall only be provided for protection of the wilderness resource and as a last resort only after trying education, other indirect management techniques or reasonable limitations on use. |
| | The number and type of outfitter-guide permits and the current amount of priority use allocated to outfitter-guides shall be retained until better total capacity figures can be derived. |
| | Outfitter-guide camps shall be located off primary trails or scenic spur trails and at a sufficient distance from attractions to avoid conflicts with visitors. |
| | New base camps shall not be authorized. Existing base camps shall be phased out within 2 use seasons of Forest Plan approval. |
| | Fuelwood gathering shall be permitted for use on-site and shall be limited to dead/down material. Fuelwood gathering shall be restricted where use is in conflict with wilderness objectives. |
| | Unpelleted hay or alfalfa should not be used. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | The Bighorn and War Creek Administrative Sites shall not be retained for administrative purposes. Disposition of facilities shall be determined following cultural resource evaluation.<br>The Spanish Camp, Stub Creek and Pasayten Airport Administrative Sites shall be retained for administrative purposes. Site plans shall be developed and only necessary structures shall be retained. The Pasayten Airstrip shall remain closed to aircraft use. The FAA shall be encouraged to remove the airstrip from aircraft charts. The airstrip shall be allowed to revegetate naturally. |
| FISH AND WILDLIFE<br>Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Temporary exclosure structures may be used to determine the impact of wildlife on vegetative cover, soil and other wilderness values.<br>In the Pasayten Wilderness, only those lakes approved in 1969 shall be aerial stocked. The fish stocking program for the Lake Chelan/Sawtooth Wilderness shall be determined within 1 year of Forest Plan approval. Barren waters shall not be stocked. Clearing of debris which impedes the movement of fish shall only occur on critical spawning streams essential for the propagation of fish. |
| RANGE<br>Range Planning | Livestock grazing shall be limited to those allotments established prior to establishment of the wilderness.<br>Recreation stock allotments shall be reviewed and analyzed as needed. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | The forage resource shall be utilized in conformance with wilderness objectives. Range allotment plans shall be updated as required. |
|  | Grazing in meadow areas heavily used by the public should be deferred until after the peak use season. |
| Range Non-structural and Structural Improvements | New structural and non-structural improvements necessary to protect the range and/or wilderness resources, rather than to increase the number of livestock, may be constructed. |
|  | New or existing improvements shall be of materials which harmonize with the wilderness character of the area as long as the use of such materials does not greatly increase costs to permittees. |
| Range Non-structural and Structural Improvements - Maintenance | Existing, necessary range improvements shall be maintained. Those determined unnecessary shall be phased out. |
| Range Administration | Fragile areas along lakeshores & streamsides shall be protected by intensified administration. |
| TIMBER |  |
| Timber Resource Management Planning and Inventories | Timber harvest shall not occur. |
| SOIL, WATER AND AIR |  |
| Water Resource Administration and Management | The existing level of Big Hidden Lake shall be retained by maintaining the upper diversion ditch and middle diversion dam. No human repairs shall be made on the lower dam. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| MINERALS | |
| Processing of Exploration Applications | Access to existing valid claims and/or leases shall be by methods which create the least lasting impact on the wilderness resource, while still meeting the needs of the claimant.<br>Where operating plans are required, they shall ensure that adverse effects are mitigated and/or corrected as soon as possible. |
| LANDS | |
| Special Uses Management (Non-Recreation) | Utility structures shall not be permitted.<br>Permanent communication facilities should be retained at Monument 83. Additional communication facilities shall not be installed.<br>The USGS stream gauging station in Andrews Creek shall be removed by 12/31/89. |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments eligible for wild and scenic rivers designation shall be protected (ref: Appendix G of DEIS). |
| PROTECTION | |
| Fire Suppression Strategy | Confine all lightning fires. Exceptions to the confinement fire policy will be to contain and/or control lightning fires that:<br>1) threaten significant cultural resources and capital investments, or<br>2) has the potential to cross the U.S./Canadian border, or<br>3) the fire threatens to leave the wilderness and enter an area with a different fire management direction, or<br>4) off-site impacts (i.e. smoke, etc.) are unacceptable. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | When containment or control action is required:<br>1) apply approved wilderness suppression guidelines which minimize disturbance resulting from all phases and types of wildfire suppression;<br>2) use indirect attack which utilizes natural fuelbreaks, changes in vegetative type, weather and topography, whenever possible. |
| | The existing Monument 83 and Slate Peak lookouts should be retained. Additional lookouts shall not be constructed. |
| | Existing inventoried helispots shall not be improved or maintained and shall be allowed to revegetate naturally. |
| | The existing RAWS unit shall be removed by 12/31/89. Additional RAWS units shall not be installed. |
| Fuel Management Inventory and Fuels Treatment | Prescribed fire shall not be used. |
| Forest Pest Management - Suppression | Insect or disease outbreaks shall not be artificially controlled unless it is necessary to protect timber or other valuable vegetation outside the wilderness. When control of insects is necessary, it shall be carried out by measures that have the least impact on the wilderness resource. |
| Forest Pest Management - Prevention | Pest populations shall be monitored to prevent spread to adjacent resource areas. |

## PRESCRIPTION 15c

**GOAL STATEMENT:** Provide a wilderness setting with constructed trails.

**DESCRIPTION:** This strategy will be applied to those areas within existing wilderness.

**DESIRED FUTURE CONDITION:** Wilderness opportunities will be provided in areas by a predominantly unmodified natural environment of large to moderate size. Users will have a high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility and selfreliance through application of outdoor skills in an environment that offers a high degree of challenge and risk. Interaction between users will be low to moderate, but evidence of other users will often be present. Human-induced restrictions and controls may be present, but will be subtle.

Constructed trail access will be apparent and will be at a level appropriate to the target user group. Trails will generally be difficult to more difficult. If trail access is needed to lakes, focal points or special attractions, only spur trails would be provided and these areas will be bypassed by main access routes.

All activities should conform with Region 6 guidelines and will follow the non-degradation policy.

Additional outfitter-guide permits will not be issued and the current amount of priority use will be retained.

Use of fuelwood will be limited to dead and down material.

Domestic livestock grazing will continue on existing allotments. Facilities to protect the range and/or wilderness resource, rather than to increase livestock numbers, will be permitted.

Mineral operating plans will ensure that adverse effects are mitigated or corrected as soon as possible.

All lightning fires will be confined and all person-caused fires will be contained and/or controlled. The use of prescription fire is not a part of this strategy.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | Visual Quality Objective shall be preservation. |
| Trail Reconstruction, Construction, Operation and Maintenance | Trails shall be constructed, reconstructed and maintained to a level appropriate to the target user group. Trails should generally be difficult to more difficult.<br>Trails shall be located to minimize conflicts with fish and wildlife.<br>If trail access is needed to lakes, focal points or special attractions, only spur trails shall be constructed. These special attraction areas shall be bypassed by main access routes. |
| WILDERNESS | |
| Wilderness Planning | One Implementation Schedule shall be completed per wilderness within 12 months of Forest Plan approval and shall be updated as needed annually. Each schedule shall contain as a minimum:<br>- specific action items needed to follow Forest Plan direction.<br>- prioritization of action items.<br>- forest or district responsibility.<br>- target dates for completion. |
| Wilderness Use Administration | The wilderness resource and its use shall be administered and used to protect the natural condition.<br>All use should conform with Region Six guidelines and shall follow non-degradation policy.<br>All proposed use of motorized equipment, mechanical transport or aircraft shall be reviewed and decided on a case-by-case basis as per 2320. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Party size limits shall be any combination of people and recreation livestock not exceeding 12, except that larger parties may be authorized on a case-by-case basis. |
| | Management of use shall utilize the following order of techniques: information services and public education, indirect management methods, area restrictions, mandatory permits, and closure to public use. |
| | Data gathering should utilize the voluntary registration system at trailheads. |
| | Facilities and improvements for visitor use shall only be provided for protection of the wilderness resource and as a last resort only after trying education, other indirect management techniques or reasonable limitations on use. |
| | The current number and type of outfitter-guide permits and the current amount of priority use allocated to outfitter-guides shall be retained until better total capacity figures can be derived. |
| | Outfitter-guide camps shall be located off primary trails or scenic spur trails and at a sufficient distance from attractions to avoid conflicts with visitors. |
| | New base camps shall not be authorized. Existing base camps shall be phased out within 2 use seasons of Forest Plan approval. |
| | Fuelwood gathering shall be permitted for use on-site and shall be limited to dead and down material. Fuelwood gathering shall be restricted where use is in conflict with wilderness objectives. |
| | Unpelleted hay or alfalfa should not be used. |
| | The Bighorn and War Creek Administrative Sites shall not be retained for administrative purposes. Disposition of facilities shall be determined following cultural resource evaluation. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | The Spanish Camp, Stub Creek and Pasayten Airport Administrative Sites shall be retained for administrative purposes. Site plans shall be developed and only necessary structures shall be retained.<br>The Pasayten Airstrip shall remain closed to aircraft use. The FAA shall be encouraged to remove the airstrip from aircraft charts. The airstrip shall be allowed to revegetate naturally. |
| FISH AND WILDLIFE |  |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Temporary exclosure structures may be used to determine the impact of wildlife on vegetative cover, soil and other wilderness values.<br>In the Pasayten Wilderness only those lakes approved in 1969 shall be aerial stocked. The fish stocking program for the Lake Chelan/Sawtooth Wilderness shall be determined within 1 year of Forest Plan approval. Barren waters shall not be stocked. Clearing of debris which impedes the movement of fish shall only occur on critical spawning streams essential for the propagation of fish. |
| RANGE |  |
| Range Planning | Livestock grazing shall be limited to those allotments established prior to establishment of the wilderness.<br>Recreation stock allotments shall be reviewed and analyzed as needed.<br>The forage resource shall be utilized in conformance with wilderness objectives.<br>Range allotment plans shall be updated as required. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Range Non-structural and Structural Improvements | New structural and non-structural improvements necessary to protect the range and/or wilderness resources, rather than to increase the number of livestock may be constructed.<br>New or existing improvements shall be of materials which harmonize with the wilderness character of the area as long as the use of such materials does not greatly increase costs to permittees. |
| Range Non-structural and Structural Improvements - Maintenance | Existing, necessary range improvements shall be maintained. Those determined unnecessary shall be phased out. |
| Range Administration and Management | Fragile areas along lakeshores and streamsides shall be protected by intensified administration. |
| TIMBER | |
| Timber Resource Management Planning and Inventory | Timber harvest shall not occur. |
| SOIL, WATER AND AIR | |
| Water Resource Administration and Management | The existing level of Big Hidden Lake shall be retained by maintaining the upper diversion ditch and middle diversion dam. No human repairs shall be made on the lower dam. |
| MINERALS | |
| Processing of Exploration Applications | Access to existing valid claims and/or leases shall be by methods which create the least lasting impact on the wilderness resource, while still meeting the needs of the claimant. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
|  | Where operating plans are required, they shall ensure that adverse effects are mitigated and/or corrected as soon as possible. |
| LANDS |  |
| Special Use Management (Non-Recreation) | Utility structures shall not be permitted.<br>Permanent communication facilities should be retained at Monument 83. Additional permanent communication facilities shall not be installed. The USGS stream gauging station in Andrews Creek shall be removed by 12/31/89. |
| Wild and Scenic Rivers Study | The potential classification attributes along river segments eligible for wild and scenic rivers designation shall be protected (ref: Appendix G of DEIS). |
| PROTECTION |  |
| Fire Suppression Strategy | Confine all lightning fires. Exceptions to the confinement fire policy will be to contain and/or control lightning fires that:<br>1) threaten significant cultural resources and capital investments, or<br>2) has the potential to cross the U.S./Canadian border, or<br>3) the fire threatens to leave the wilderness and enter an area with a different fire management direction, or<br>4) off-site impacts (i.e. smoke, etc.) are unacceptable. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | When containment or control action is required: |
| | 1) apply approved wilderness suppression guidelines which minimize disturbance resulting from all phases and types of wildfire suppression;<br>2) use indirect attack which utilizes natural fuelbreaks, changes in vegetative type, weather and topography, whenever possible. |
| | The existing Monument 83 and Slate Peak lookouts should be retained. Additional lookouts shall not be constructed. |
| | Existing inventoried helispots shall not be improved or maintained and shall be allowed to revegetate naturally. |
| | The existing RAWS unit shall be removed by 12/31/89. Additional RAWS units shall not be installed. |
| Fuel Management Inventory and Fuels Treatment | No use of prescribed fire. |
| Forest Pest Management - Suppression | Insect or disease outbreaks shall not be artificially controlled unless it is necessary to protect timber or other valuable vegetation outside the wilderness. When control of insects is necessary, it shall be carried out by measures that have the least impact on the wilderness resource. |
| Forest Pest Management - Prevention | Pest populations shall be monitored to prevent spread to adjacent resource areas. |

# PRESCRIPTION 17

**GOAL STATEMENT**: Provide a range of developed recreation opportunities in a roaded setting.

**DESCRIPTION**: This strategy applies to Management Area 17, developed recreation sites, including private sector sites, outside the North Cascade Scenic Highway. This includes, but is not limited to, campgrounds, picnic grounds, boat sites, trailheads, observation sites, interpretive sites, sno-parks, downhill ski areas, organization sites and summer home areas. The area allocated to this use includes only the specific site development. Areas of influence are not included.

**DESIRED FUTURE CONDITION**: Facilities will be where opportunities for meaningful experiences are present and where the setting ranges from predominantly natural appearing to substantially urbanized. The probability of experiencing affiliation with other users will be prevalent as will be the convenience of facilities. The setting and opportunities for challenge and risk and the testing of outdoor skills is generally unimportant except for activities such as downhill skiing. Concentration of users ranges from low to high. Sites will be managed in such a way that controls and restrictions are obvious.

Vegetation will be managed according to individual site vegetative management plans and may include tree harvest, thinning and other cultural activities.

Roads will be constructed, reconstructed and maintained to encourage highway vehicle use commensurate with the design level of the site.

All fee sites and trailheads serving trails leading to classified areas and recreation management emphasis areas will be maintained to standard. Non-fee sites may be maintained to less than standard.

New site construction and existing site expansion will only be accomplished to meet additional demands, or to enhance recreation opportunities.

All new developed sites will be recommended for withdrawal from mineral entry where mineral potential is moderate or high. Domestic livestock grazing will generally be excluded.

Wildfires will be vigorously controlled.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | Vegetative management plans shall be completed for all sites. Vegetative management may include tree removal, thinning and other cultural activities. |
| | The visual quality objective shall range from Retention to Modification. Exceptions are permitted for treatment of insects and/or disease as allowed under this strategy. |
| Facility and Site Management | All facilities at fee sites and trailheads leading to classified areas or recreation management emphasis areas shall be maintained to Maintenance Class I standards. |
| | Facilities at non-fee sites may be maintained to less than Maintenance Class I standards. |
| Use Administration | All recreation special use sites shall be inspected yearly with emphasis on health, safety and resource protection. Monitor systems at downhill ski areas. |
| | Summer homes shall be retained at designated summer home sites and termination dates standardized as soon as legally possible. |
| | Sno-park needs shall be coordinated with County Snowmobile Advisory Board and local cross-country ski organizations. |
| | Development at downhill ski areas shall be permitted as authorized by an approved Master Plan and Site Development Plan. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| | Existing organization sites shall be retained. Site plans should be updated prior to installation of new facilities or major upgrading of existing facilities.<br>"Future use determination" for all government-owned improvements under Granger-Thye permit shall be completed prior to authorizing a new use or transferring use. A 5-Year Operation and Maintenance Plan shall be completed if decision is to continue use of improvements. |
| Facility and Site Reconstruction and Construction | New site construction, existing site expansion and major site upgrading shall only be accomplished to meet recreation demands or to enhance recreation opportunities.<br>Approved design criteria and site plans shall be required for all new site construction, existing site expansion and major site upgrading.<br>All new site construction, existing site expansion and major site upgrading shall provide for the needs of the handicapped. |
| RANGE | |
| Range Structural Improvement Maintenance | Domestic livestock grazing should generally be excluded from developed recreation sites. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Scheduled timber harvest shall not be permitted. Non-scheduled timber harvest may be used to accomplish vegetative management objectives.<br>Prohibit fuelwood gathering for off-forest use. |
| LANDS | |
| Withdrawals, Modifications and Revocations | Sites shall be recommended for withdrawal from mineral entry where mineral potential is high or moderate. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Property Boundary and Corner Location and Maintenance | Property boundaries and corners on sites adjoining private property should be established and maintained. |
| FACILITIES | |
| Road Operation and Maintenance | Roads within the developed site shall be reconstructed, constructed and/or operated and maintained to encourage highway vehicles and to a level commensurate with the design level of the site. |
| PROTECTION | |
| Fire Suppression Strategy | All wildfires shall be suppressed at 10 acres or less.<br>Suppression methods that minimize site disturbance shall be used. |
| Fuel Management Inventory and Fuels Treatment | Fuels should be treated to preclude wildfires from occurring at Fire Intensity Level 3 or above. |
| Forest Pest Management - Suppression | Stands shall be managed to control insect and disease problems to minimize outbreaks and to minimize risk to users and facilities from endemic populations. |

# PRESCRIPTION 19

GOAL STATEMENT: Provide coniferous old growth habitat for wildlife.

DESCRIPTION: This applies to specific stands of both mixed conifer and lodgepole types throughout the forest.

DESIRED FUTURE CONDITION:

A. Vegetation - The minimum size of old growth stands will be 30 acres; the optimal size would be 100 acres or larger. Harvest and thinning units (shelterwood, partial cut, intermediate cuts and timber stand improvements) in areas designed to create replacement old growth will be of a size to best meet future needs for old growth. Allocated stands will be protected until other stands become old growth and provide similar habitat values in the future. Minimum management requirements (MMRs) for mature/old growth indicator species will be part of this strategy for old growth and replacement stands. Even-aged management will be practiced in stands capable of producing 20 cubic feet per acre CMAI. Both even- aged and uneven-aged methods will be applied in stands not capable of producing 20 cubic feet per acre CMAI.

Within each township, 5 percent of the suitable acres producing greater than 20 cubic feet per acre per year in mixed conifer and lodgepole stands will be retained in an old growth condition, where possible. Replacement old growth will be managed to provide 5 percent old growth per township in the future.

Definition for mixed conifer old growth:

Presence of large (20"+) live trees with 15 or more trees per acre 18"+ dbh

Presence of large (20"+) snags with 2 or more snags per acre 12"+ diameter

Presence of large (20"+) down logs with 3 or more logs per acre 12"+ diameter

Presence of multi-storied canopy (Douglas-fir/pinegrass) is an exception.

Presence of 50% overhead crown closure (20%-50% in stands dominated by ponderosa pine or in dry-site Douglas-fir)

Definition of lodgepole pine old growth:

Presence of 50% or more crown closure in stands with trees 6" or greater in diameter

Presence of at least 3 snags and 3 tons of down material including 3 snags per acre

Presence of at least 60% lodgepole pine in overstory canopy level

B. Access - Cross-country ski trails and snowmobiling will be limited in areas of concentrated wildlife use (e.g. deer winter range). Motorized vehicles will be generally eliminated.

Indicator Species

The management indicator species are marten, pileated woodpecker, three-toed woodpecker, barred owl and spotted owl.

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RECREATION | |
| Recreation Planning | The Visual Quality Objective shall be modification in level "1" road and trail corridors and maximum modification in all other areas. |
| FISH AND WILDLIFE | |
| Wildlife Surveys, Planning, Prescriptions, Monitoring, Cooperation and Administration | Develop project prescriptions to achieve and maintain conditions described above. Priorities shall be as follows: (1) protect existing old growth where needed, (2) protect "near old growth" (capable of being old growth in 100 years or less) where needed, and (3) manage or protect younger stands which are capable of being old growth over the long-term.<br>In mixed conifer stands, snags shall be provided for at least 80% of potential woodpecker population size on a 320-acre basis. When potential is not present on forested lands, manage to approach this percentage as closely as possible. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| RANGE | |
| Range Resource Planning and Inventory | 50% of the above-the-ground biomass is reserved for vigor and maintenance of grass plants. Of the remainder, 50% of the annual grass production should be for livestock use and 50% should be reserved for wildlife. These figures may vary depending upon specific site needs and the overall intent of the management area. |
| Range Administration and Management | Administration and management of annual operating plans shall be carried out to comply with the needs of wildlife. |
| TIMBER | |
| Timber Resource Management Planning and Inventories | Old growth shall be created by scheduled or non-scheduled timber harvest.<br>Eliminate or prohibit the use of natural or created slash for fuelwood. |
| Regeneration Harvests | Harvest shall provide the conditions needed for future old growth.<br>Even-aged management shall be practiced in the Moist Productive, Dry Productive and Lodgepole Pine working groups.<br>A created opening for wildlife management purposes is defined as an area where conifer regeneration is less than 6 feet tall following clearcutting, seed tree cutting or overstory removal cutting.<br>Rotation length shall be based on meeting structural definition of old growth.<br>Provide green tree replacements for snags as necessary to meet 80% of the potential woodpecker population size. |
| Intermediate Harvests | Harvest shall provide the conditions needed for future old growth. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Reforestation | Reforestation shall occur to provide habitat conditions for old growth.<br>Stands to be managed for cover should not contain more than 10% western larch. |
| Timber Stand Improvement | Stand improvements may be prescribed to meet the structural definition of old growth. |
| Timber Sale Preparation | Harvest plans shall be planned to perpetuate old growth habitat.<br>Operating season for logging and post sale operations shall be unrestricted, except to protect roads, soil, water and wildlife resources. Operating season for logging and post sale operations shall be coordinated with recreation activities conducted under agreement or special use permit. To protect fawning and deer during severe winters, the operating season shall be decided on a case-by-case basis in deer winter range and in fawning areas. |
| MINERALS AND GEOLOGY | |
| Processing of Exploration Proposals, Lease Applications, Site-Specific Development Proposals and Administration of Operations | Exploration activities shall occur outside of fawning, wintering and nesting seasons. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| FACILITIES | |
| Transportation System Planning, Inventory and Arterial Road Preconstruction; Timber Purchaser Road Reconstruction and Construction Engineering | Road, bridge, culvert and dam planning, design, construction, reconstruction, maintenance and management shall conform with the needs of wildlife.<br>Motorized vehicles shall be eliminated or prohibited, except where designated open. Where practicable, no new roads should be constructed.<br>Generally, commercial hauling operations on arterials and collectors shall take precedence over recreation traffic. |
| PROTECTION | |
| Fire Suppression Strategy | Control all wildfires at 10 acres or less.<br>Contain all wildfires in fire tolerant stands at Fire Intensity Level 2 and below where loss of old growth characteristics are not affected. |
| Fuel Management Inventory and Fuels Treatment | None in existing old growth areas. In areas managed for future old growth, fuels treatment, including the use of prescribed, shall provide, where practicable, retention of key components of wildlife habitat (i.e. cover, bitter brush, snags, and down logs).<br>Schedule activities so as not to unduly disturb wildlife use, access and movement.<br>Most logs retained for wildlife habitat (see Forestwide Standards and Guidelines) should be uncharred.<br>Do not prescribe fuel treatment levels to dispose of all activity or natural fuels.<br>Prescribed fire may be used as a tool to accomplish the management objectives of this strategy. |

| ACTIVITY | STANDARDS AND GUIDELINES |
|---|---|
| Forest Pest Management - Suppression and Prevention | Forest pest suppression and prevention shall be implemented to protect key components of wildlife habitat.<br>Suppress insects and diseases when adversely affecting vegetation essential for maintaining wildlife and/or unacceptable damage to resources would occur if no controls are applied. Use IPM to select suppression strategies.<br>Utilize Integrated Pest Management (IPM) strategies to prevent unacceptable damage and meet resource objectives. |

## ALTERNATIVE G
## MANAGEMENT AREA ACRES BY DISTRICT

(Thousand Acres)

| Management Area Prescription Number | WINTHROP | TWISP | TONASKET | TOTAL |
|---|---|---|---|---|
| 1 | 68.6 | 92.3 | 102.8 | 263.7 |
| 2 | 8.6 | 11.7 | 13.0 | 33.3 |
| 3 | 12.8 | 17.3 | 19.2 | 49.3 |
| 4 and 4M | 92.8 | 17.1 | 22.3 | 131.4 |
| 5 | 62.0 | 28.6 | 28.6 | 119.2 |
| 7 | 72.5 | --- | --- | 72.5 |
| 8 Research Natural Area | 0.1 | --- | 4.5 | 4.6 |
| 9 | 6.6 | 25.6 | 50.5 | 82.7 |
| 10 | 12.1 | 3.0 | --- | 15.1 |
| 11 | --- | --- | 4.9 | 4.9 |
| 12 | 36.7 | 0.8 | 40.6 | 78.1 |
| 13 | 3.3 | 4.4 | 4.9 | 12.6 |
| 14 | 15.8 | 67.2 | 48.8 | 131.8 |
| 15 Wilderness | 519.8 | 75.1 | 31.3 | 626.2 |
| 16 | 15.2 | 20.4 | 22.8 | 58.4 |
| 17 | 4.1 | 0.3 | 0.1 | 4.5 |
| 19 | 4.6 | 6.3 | 7.0 | 17.9 |
|  | 934.8 | 370.1 | 401.3 | 1706.2 |

Prescription 16 is a map inclusion within Management Areas 1, 2, 5, 7, 9, 12, 13, 14 and 19; the MA's where timber management could be scheduled.

## Chapter 5

# IMPLEMENTATION OF THE FOREST PLAN

## INTRODUCTION

Implementation of the Proposed Okanogan National Forest Plan requires moving from an existing management program, with a budget and "targets" for accomplishment, to a new management program with a budget, goals and objectives that provide a different way of addressing the issues and concerns people have voiced about forest management. This Forest Plan establishes the direction for the Okanogan National Forest for the next 10 to 15 years, when used in conjunction with Forest Service Manuals and Handbooks and the Pacific Northwest Regional Guide.

This chapter explains how management of the Okanogan National Forest moves from the Current Direction and Existing Situation to the Proposed Action, all described in the DEIS. The following sections describe aspects of implementation that are influenced by previous management activities and objectives; the relationship between project planning and this Forest Plan; the goals of and requirements for monitoring and evaluation; and the circumstances which could require the plan to be amended or revised.

## IMPLEMENTATION DIRECTION

### PROJECT SCHEDULING

The schedule of proposed projects is contained in the appendices of this document. Listings of possible projects to meet or accelerate the ten-year management practice schedule are maintained by the unit managers. These listings will routinely change as projects are implemented or are removed from the listings for other reasons, and as new projects take their place. Projects are scheduled in response to the planned output of goods and services and the annual budgeting process.

### CONSISTENCY WITH OTHER INSTRUMENTS

Subject to existing rights, all other contracts, cooperative agreements or instruments for occupancy and use of lands will be brought into compliance with the plan no later than one year after the plan is enacted or as otherwise specified in Standards and Guidelines.

#### Timber

The schedule of timber sale offerings contained in Appendix E will be updated at least annually. All timber sales offered for sale after issuance of the Forest Plan will be in compliance with direction contained in the Plan. Timber sales now under contract will be administered under provisions of the existing contracts. Changes to existing timber sale contracts may be proposed on a case-by-case basis where over-riding resource protection considerations are present.

All reforestation, timber stand improvement and related silvicultural activities proposed following issuance of the Forest Plan will be in compliance with direction contained in the Plan. Existing contracts for non-timber sale silvicultural work issued prior to Forest Plan approval will continue to be administered under provisions of the pre-existing contracts. Changes to pre-existing contracts may be made on a case-by-case basis when over-riding resource considerations exist. On-going non-timber sale silvicultural work being accomplished by Forest Service crews will immediately comply with direction upon approval of the Forest Plan.

Functional timber plans such as the Forest Tree Improvement Plan, Seed Orchard Management Plans and Tree Seed Inventory Plan will be brought into compliance with direction contained in the Forest Plan within two (2) years of issuance. Updates to functional plans will be in compliance with provisions of the Forest Plan.

## Recreation

Issuance of new recreation special use permits or reissuance of existing annual recreation special use permits will be consistent with Forest Plan direction on the first issuance or reissuance date following Forest Plan implementation.

Reissuance of existing term recreation special use permits will be consistent with Forest Plan direction on the first reissuance date or the first proposed permit transfer date following Forest Plan implementation.

The Forest Travel Plan will be consistent with Forest Plan direction on the first reissuance date following Forest Plan implementation.

The Memorandum of Understanding between Okanogan County and the Okanogan National Forest relating to the county snowmobile grooming program will be consistent with Forest Plan direction prior to the first snowmobile grooming season following Forest Plan implementation.

## Minerals

New minerals lease applications, permits, contracts and operating plans will be evaluated for consistency with the Forest Plan as they are received or proposed. All existing permits and operating plans will be reviewed for consistency with Forest Plan standards and guidelines within one year and operators and permittees will be notified of any necessary modifications.

Mineral materials sales now under contract will be administered under provisions of the existing contracts. Changes to these may be proposed on a case-by-case basis where over-riding resource protection considerations are present.

The Forest Service has no authority to modify stipulations attached to existing mineral leases, so none will take place.

### Lands

Several steps must be taken before the forest's Land Ownership Adjustment Program will be consistent with the Forest Plan. These steps and target dates are listed below:

1. Prepare preliminary lists and maps of the 5 groups of National Forest Lands (see lands program summary). Complete within 6 months of approval of Forest Plan.

2. Solicit public input on the above lists and maps. Complete within one year of approval of Forest Plan.

3. Prepare final list and maps of groups of land. Complete within 15 months of completion of Forest Plan.

4. See that all future land ownership adjustment proposals agree with final listing. Initiate within 15 months of approval of Forest Plan.

All facilities and management plans thereof (e.g. roads, buildings, airfields, etc.) will be consistent with Forest Plan direction within one year of issuance of the Final Forest Plan, subject to valid existing rights of outstanding permits, contracts and cooperative agreements.

All other instruments are consistent with the proposed Forest Plan.

## BUDGET PROPOSALS

The plan's scheduled projects are translated into multi-year program budget proposals that identify needed expenditures. The schedule is used for requesting and allocating the funds needed to carry out the planned management direction. Upon approval of a final budget for the forest, the annual program of work is finalized and carried out. Accomplishment of the annual program is the incremental implementation of the management direction of the Forest Plan. Outputs and activities in individual years may be significantly different from those shown in Chapter 4, depending on final budgets.

## ENVIRONMENTAL ANALYSIS

Projects and activities permitted through this Forest Plan are subject to analysis under the NEPA process as they are planned for implementation. If the environmental analysis for a project shows that: (1) the management area prescriptions, standards and guidelines can be complied with, and (2) little or no environmental effects are expected beyond those identified and documented in the Forest Plan Final EIS, the analysis will probably result in a categorical exclusion. An analysis file and/or a project file will be available for public review, but the analysis will not necessarily be documented in the form of an environmental assessment or environmental impact statement.

## MONITORING AND EVALUATION PROGRAM

The Monitoring Plan, Table 5-1, identifies the key activities and outputs to be tracked during implementation of this plan to ensure that activities reasonably conform to the Management Area direction, and that outputs satisfy the objectives of the Plan.

The monitoring process is to:

1. Measure the stated items at a pre-determined frequency and accuracy.
2. Report those measurements in a prescribed manner.
3. Evaluate the results.
4. Take appropriate action based on the evaluation.

Monitoring will determine:

- if management area direction is being applied as directed.
- if standards are being followed.
- if the forest is achieving the objectives of the Plan.
- if application of management area direction is achieving desired conditions.
- if the effects of implementing the Plan are occurring as predicted.
- if the costs of implementing the Plan are as predicted.
- if management practices on adjacent or intermingled non-National Forest lands are affecting the Forest Plan goals and objectives.
- if implementation of the Forest Plan is keeping other agencies from reaching their stated objectives.

Evaluation of the results of the site-specific monitoring program will be documented in the annual evaluation report. The significance of the results of the monitoring program will be analyzed and evaluated by the forest interdisciplinary team.

Based on the evaluation, any need for further action is recommended to the Forest Supervisor. The action prescribed by the Forest Supervisor will depend on the significance of the results of monitoring. The magnitude of the change from predicted conditions is an important factor, as is the risk associated with the change. For example, a finding of somewhat more or less recreation visits than predicted has considerably less significance than a finding of reduced water quality in terms of risk. Procedures prescribed by the National Environmental Policy Act will be followed as the Forest Supervisor determines the appropriate action.

Actions directed by the Forest Supervisor could include one or several of the following:

1. A determination that no action is needed, that monitoring indicates goals, objectives and standards are being achieved.

2. District Ranger(s) may be directed to improve application of management area direction as projects are implemented. Normally this would involve a change in proposed project design, or a site-specific interpretation of management area direction. In some instances, additional information or study may be required due to an inconclusive evaluation.

3. Management area direction may be modified as a Plan amendment. This would normally involve a question of the applicability of the direction to a specific geographic area, rather than forest-wide for a particular management area.

4. The allocation of a prescription may be modified as a Plan amendment.

5. The projected schedule of outputs may be amended.

6. The needed action may singly or cumulatively be so significant as to cause the Forest Supervisor to initiate revision of the Plan.

A file will be maintained in the office of the Forest Supervisor which documents all decisions resulting from monitoring and evaluation.

The monitoring requirements of the Plan appear on tables following this section. The following definitions will assist in understanding the contents of the tables. (The alpha characters B through K are also column identifiers on the table.)

A. The table is divided into sections, the first section being general monitoring requirements, followed by resource-specific requirements, such as those applicable to recreation, wildlife or timber.

B. Action/Effect Monitored - This is a concise description of the specific item to be measured.

C. Objective of Monitoring - A statement indicating the purpose of monitoring this specific item.

D. Method of Monitoring/Frequency - Description of the monitoring techniques and/or sources of information to be employed. Frequency details how often monitoring will occur.

E. Unit of Measure - Where feasible, a standard unit such as acres will be measured. Some monitoring items will not have a unit of measure.

F. Reporting Period - Results of monitoring will be summarized and reported once each reporting period.

G. Precision/Reliability - Precision refers to the accuracy standard to which monitoring information will be collected. Reliability is an indication of how accurately the monitoring sample would reflect the total forest situation. A qualitative 3-class system is used to rate both precision and reliability, High (H), Moderate (M) and Low (L). A rating of H/M would indicate high precision, moderate reliability.

H. Data Storage - Indicates location or format of monitoring information storage.

I. Responsibility - Indicates the specific position responsible for collection, evaluation and maintenance of monitoring information. This constitutes a delegation from the Forest Supervisor, who has overall line responsibility.

J. Monitoring Cost - Monitoring costs, in thousands of dollars, are only those which are in addition to on-going monitoring processes. No costs are assigned to activities which are already occurring.

K. Threshold of Variability - A statement which describes the tolerance limits within which actual performance can vary from predicted performance. When these limits are exceeded, further evaluation is triggered. In some cases a standard may be specified.

TABLE 5.1
MONITORING ACTIONS

| ACTION/EFFECT MONITORED A | OBJECTIVE OF MONITORING B | METHOD OF MONITORING/ FREQUENCY C | UNIT OF MEASURE D | REPORT PERIOD E | PREC/ RELIA F | DATA STOR. G | RESPONS-IBILITY H | MONI COST I | THRESHOLD OF VARIABILITY J |
|---|---|---|---|---|---|---|---|---|---|
| **GENERAL** | | | | | | | | | |
| Project compliance with NEPA procedures | NEPA compliance including implementing standards and guidelines of this plan | All NEPA documents will be reviewed & one project per district per year will be reviewed as per FSH 1909.15, Okanogan Supplement No. 1. | NEPA inconsistencies & results of appeals | Each project | H/M | 1950 files | LMP Staff | --- | Improper application of FSM and FSH direction; upheld appeals |
| **RECREATION** | | | | | | | | | |
| Physical, social & managerial setting for recreation opportunities | Assure that selected physical and visual attributes described in the ROS User's Guide are being protected from degradation in recreation mgmt. emphasis areas | Project review involving vegetation manipulation, road or trail reconstruction and construction in rec. mgmt areas/ Continuous | --- | Annual | M/M | Summ. 2310 files | Rec Staff | --- | When desired, physical, social and managerial setting would not be achieved |
| User (visitor) needs and expectations | Identify changing needs and expectations | Sample field contacts with users in rec. mgmt emphasis areas/Continuous throughout heavy use season<br>Review of public comments/Continuous | --- | 5 yrs | L/M | Summ. 2310 files | District Rangers | --- | When more than 50% of comments over 5-year period indicates needs of public are not being met |

TABLE 5.1
MONITORING ACTIONS

| ACTION/EFFECT MONITORED A | OBJECTIVE OF MONITORING B | METHOD OF MONITORING/ FREQUENCY C | UNIT OF MEASURE D | REPORT PERIOD E | PREC/ RELIA F | DATA STOR. G | RESPONS- IBILITY H | MONI COST I | THRESHOLD OF VARIABILITY J |
|---|---|---|---|---|---|---|---|---|---|
| Effects of ORV use on land and other resources and rec. uses | Avoid resource damage and/or conflicts with non-motorized users | Sample field observations for effects on land and other resources/Continuous throughout heavy use season<br>Sample field contacts with non-motorized users in areas open to ORV use/Continuous throughout heavy use season<br>Review of public comments/Continuous | --- | Annual | L/M | Summ. 2310 files | District Rangers | 1.0 | When use is resulting in unacceptable resource impacts or numerous reports of conflicts are reported |
| **WILDERNESS** | | | | | | | | | |
| Physical, social & managerial setting for wilderness opportunities | Assure that wilderness attributes are maintained above Region 6 guidelines (2320 FSM Supplement 56) | Sample field observation of heavy use areas and travel corridors/Continuous throughout heavy use season | --- | Annual | M/M | Summ. 2320 files | District Rangers | --- | When minimum standards are not being met or a downward trend is indicated |
| Specific area use levels | Assure use levels in specific areas are within established carrying capacities | Sample field observations and review of RIM use reports/ Continuous throughout heavy use season for field observation and yearly for RIM rpts | --- | Annual | M/M | Summ. 2320 files | District Rangers for field observations and Rec Staff for RIM | --- | When actual use exceeds established carrying capacities or a downward trend in resource impacts is indicated |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONS- IBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| **WILD AND SCENIC RIVERS** | | | | | | | | | |
| Effects of activities on attributes for potential classification of river segments eligible for wild & scenic river designation | Assure that attributes for potential classification of river segments eligible for wild & scenic river designation are maintained (Final Revised Guidelines) | Project reviews involving vegetation manipulation, road or trail reconstruction along eligible river segments | --- | Annual | M/M | Summ. 2310 files | Rec Staff | --- | When activities would lower potential classification of the river segment |
| **WILDLIFE** | | | | | | | | | |
| Mule Deer (mgmt indicator for deer winter range) | Ascertain habitat capability trends | Sample amount of snow intercept thermal, winter thermal and hiding cover on winter range using Landsat data and aerial photos with field sampling as imagery data or photos are updated | Percent | 3 yrs | M/H | Wildlife data systems | Wildlife Staff | 4.0 | Amounts less than predicted in Forest Plan EIS |
| | | Sample amount of summer thermal and hiding cover on non-winter range in the above manner and frequency | Percent | 5 yrs | M/M | Wildlife data systems | Wildlife Staff | 4.0 | Amounts less than expected in management strategies, standards and guidelines |
| | | Sample amount, quality and time of use of forage from WDG browse transects & F.S. range surveys annually | Percent, condition & season of use | 3 yrs | M/M | Wildlife data systems | Wildlife Staff | 1.0 | Amounts and conditions less than that stated in mgmt strategies |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED<br>A | OBJECTIVE OF MONITORING<br>B | METHOD OF MONITORING/ FREQUENCY<br>C | UNIT OF MEASURE<br>D | REPORT PERIOD<br>E | PREC/ RELIA<br>F | DATA STOR.<br>G | RESPONS- IBILITY<br>H | MONI COST<br>I | THRESHOLD OF VARIABILITY<br>J |
|---|---|---|---|---|---|---|---|---|---|
|  | Ascertain population trends | Estimate numbers using WDG survey data and hunter information annually | Numbers | 5 yrs | M/M | Wildlife data systems | Wildlife Staff | 0.2 | Trends less than predicted (as habitat capability) in Forest Plan EIS |
| Spotted owl, Barred owl, Pileated woodpecker, Three-toed woodpecker, Marten (mgmt indicators of old growth & mature conifers) | Ascertain habitat capability trends | Sample amount of suitable old growth and mature habitat using Landsat data, aerial photos with field sampling as imagery data or photos are updated | Acres | 3 yrs | M/H | Wildlife data systems | Wildlife Staff | 4.0 | Amounts less than predicted in Forest Plan and EIS, or expected in mgmt strategies, standards and guidelines |
|  | Ascertain population trends | Estimate numbers using WDG non-game survey data and trapper info and F.S. survey data, if State data is not available on a continuing basis | Numbers | 5 yrs | L/M | Wildlife data systems | Wildlife Staff | 5.0 | Trends less than predicted (as habitat capability) in Forest Plan EIS |
| Primary Cavity Excavators (10 species of woodpeckers - mgmt indicators for dead & defective trees) Pileated, 3-toed, black-backed, downy, hairy, Lewis' and whiteheaded woodpeckers; yellow-bellied and Williamson's sapsuckers & common flicker | Ascertain habitat capability trends | Estimate numbers of snags and wildlife trees by sampling tmbr mgmt projects and established transects (presently in place and previously used for forestwide baseline information).<br>Sample on a continuing basis by project and every 3 yrs along transects | Numbers | 6 yrs | M/M | Wildlife data systems | Wildlife Staff and District Rangers | 3.0 | Amounts less than predicted in Forest Plan EIS & expected in mgmt strategies, standards and guidelines |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED A | OBJECTIVE OF MONITORING B | METHOD OF MONITORING/ FREQUENCY C | UNIT OF MEASURE D | REPORT PERIOD E | PREC/ RELIA F | DATA STOR. G | RESPONS-IBILITY H | MONI COST I | THRESHOLD OF VARIABILITY J |
|---|---|---|---|---|---|---|---|---|---|
|  |  | Estimate numbers of snags by sampling firewood cutting areas on an annual basis | Numbers | 2 yrs | L/M | Wild-life data systems | District Rangers | 2.0 | Amounts less than predicted in Forest Plan EIS & expected in mgmt strategies, standards and guidelines |
|  | Ascertain population trends | Estimate numbers per unit time by sampling along predetermined transects in managed & unmanaged stands. Systematic sampling every 3 years in conjunction with snag estimates along transects | Numbers per unit of time | 10 yrs | --- | Wild-life data systems | Wildlife Staff and District Rangers | 7.0 | Trends less than predicted (as habitat capabililty) in Forest Plan EIS |
| Anadromous fish and resident trout (mgmt indicators for riparian aquatic) | Ascertain habitat capability trends | Evaluate sample activities & resulting conditions which could alter fish habitat, especially potential for sedimentation & modification of fish passage on a continuing basis | Condition | 3 yrs | L/M | Wild-life data systems | Wildlife Staff and District Rangers | 0.7 | Conditions which are adverse to fisheries and inconsistent w/expectations in mgmt strategies, standards and guidelines |
|  | Ascertain population trends | Estimate numbers from WDG and WDF surveys and fishing information annually | Numbers | 5 yrs | --- | Wild-life data systems | Wildlife Staff and District Rangers | 0.2 | Trends less than predicted (as habitat capability) in Forest Plan EIS |

TABLE 5.1
MONITORING ACTIONS

| ACTION/EFFECT MONITORED<br>A | OBJECTIVE OF MONITORING<br>B | METHOD OF MONITORING/ FREQUENCY<br>C | UNIT OF MEASURE<br>D | REPORT PERIOD<br>E | PREC/ RELIA<br>F | DATA STOR.<br>G | RESPONS-IBILITY<br>H | MONI COST<br>I | THRESHOLD OF VARIABILITY<br>J |
|---|---|---|---|---|---|---|---|---|---|
| Lynx (management indicator for lodgepole pine) | Ascertain habitat capability trends | Estimate amount of lodgepole pine providing lynx habitat (cover & prey base) in primary lynx area. Use Landsat and aerial photos with field sampling as imagery data or photos are updated | Percent seedling, sapling & pole condition providing habitat | 5 yrs | M/M | Wildlife data systems | Wildlife Staff | [illegible].0 | Amounts less than predicted in Forest Plan EIS |
| | Ascertain lynx population trends | Annually utilize population estimates by WDG & compare with available baseline data (i.e. existing research data by WDG and presently on-going research data by Idaho State University) on a continuing basis | Numbers | 10 yrs | L/M | Wildlife data systems | Wildlife Staff | 0.5 | Trends less than predicted (as habitat capability) in Forest Plan EIS |
| Ruffed Grouse (mgmt indicator for deciduous vegetation) | Ascertain habitat capability trends | Estimate acreage of aspen in tmbr mgmt areas compared with existing amounts. Sample project areas every two years | Acres | 5 yrs | L/M | Wildlife data systems | Wildlife Staff and District Rangers | 0.8 | Representation of aspen which is less than expected in management strategies, standards and guidelines |
| | Ascertain population trends | Estimate relative abundance from field observations and WDG surveys and hunter information annually | Numbers | 10 yrs | L/L | Wildlife data systems | Wildlife Staff and District Rangers | 0.2 | Trends less than predicted (as habitat capability) in Forest Plan EIS |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED A | OBJECTIVE OF MONITORING B | METHOD OF MONITORING/ FREQUENCY C | UNIT OF MEASURE D | REPORT PERIOD E | PREC/ RELIA F | DATA STOR. G | RESPONS-IBILITY H | MONI COST I | THRESHOLD OF VARIABILITY J |
|---|---|---|---|---|---|---|---|---|---|
| Bald Eagle (a threatened species) | Ascertain effect of mgmt activities on habitat and populations | Sample field observations in the course of other activities & established transects for annual winter bald eagle count/ annually | Numbers of animals, perching sites and habitat for prey base | Annual | M/M | Wildlife data systems | Wildlife Staff and District Rangers | 1.0 | Effects which are adverse and unexpected from predictions in Forest Plan EIS. Inconsistency with Recovery Plan |
| Grizzly Bear (a threatened species) | Ascertain effect of mgmt activities on potential habitat and populations | Field observations, follow-up to reported sightings, analysis of any special survey results annually | --- | Annual | L/L | Wildlife data systems | Wildlife Staff and District Rangers | 1.0 | Effects which are adverse and unexpected from predictions in Forest Plan EIS. Inconsistency with Recovery Plan |
| Bighorn Sheep (a demand species) | Ascertain habitat capability trends | Measure amount snow intercept thermal, winter thermal and hiding cover in bighorn sheep range using Landsat data and aerial photos with field sampling as imagery data or photos are updated | Percent | 3 yrs | M/M | Wildlife data systems | Wildlife Staff and District Rangers | 1.0 | Amounts less than expected in bighorn sheep mgmt. strategy |
|  |  | Estimate amount, quality and time of use of forage from F.S. range surveys annually | Percent, condition & season of use | 3 yrs | M/M | Wildlife data systems | Wildlife Staff and District Rangers | 1.0 | Amounts and conditions less than that stated in mgmt strategies |

TABLE 5.1
MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONSIBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
|  | Ascertain population trends | Estimate numbers using FS-WDG annual bighorn sheep survey and yearlong observations and follow-up to reported sightings annually | Numbers | 3 yrs | L/M | Wildlife data systems | Wildlife Staff and District Rangers | 1.0 | Downward trends which are inconsistent with goal of mgmt strategy |
| Mountain Goat (a demand species) | Ascertain habitat capability trends | Assess cover and forage in mountain goat habitat every 5 years | Amount, condition & quality | 5 yrs | L/M | Wildlife data systems | Wildlife Staff and District Rangers | 0.5 | Downward trends which are inconsistent with goal of mgmt strategy |
|  | Ascertain population trends | Estimate numbers using WDG survey & hunter information on an annual basis | Numbers | 5 yrs | L/M | Wildlife data systems | Wildlife Staff and District Rangers | 0.2 | Downward trends which are inconsistent with goal of mgmt strategy |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED<br>A | OBJECTIVE OF MONITORING<br>B | METHOD OF MONITORING/ FREQUENCY<br>C | UNIT OF MEASURE<br>D | REPORT PERIOD<br>E | PREC/ RELIA<br>F | DATA STOR.<br>G | RESPONSIBILITY<br>H | MONI COST<br>I | THRESHOLD OF VARIABILITY<br>J |
|---|---|---|---|---|---|---|---|---|---|
| **RANGE** | | | | | | | | | |
| Range Utilization | | Patterns and use trends per FSH 2209.21, R-6, using occular estimates | Percent use by utilization code | Level D (Intensive Mgmt) - Annually to 1990, then spot checks | --- | TRI & Allotment Mgmt Plans | Evaluation rpt by DR at:<br>Level D: End of each allotment rotation<br>Level C: End of each allotment rotation<br>Level B: 5 years | | Corrective action required when utilization exceeds prescribed stndrds in Allotment Mgmt Plan consistently through rotation cycle |
| | | | | Level C (Extensive Mgmt) - Bi-ann. to 1990, then spot checks | Mod | | | | |
| | | | | Level B (Season Long) Annually on key areas | Mod | | | | |
| Range Condition | | Photo transects on each allotment and Parker three-step transects | Trend codes | 5-yr intervals on problem allotments | Mod | TRI, FS RAMIS & Allotment Mgmt Plan (AMP) | DR in AMP following transects | | Corrective action required when there is downward change in trend, or no change toward upward trend on poor and fair condition range |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONS- IBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| Forage Grazed | | Permittee reports supplemented with periodic counts | AUMs | Annual | Mod | MARS Rpt & Range Stat. Rpt in FS RAMIS | District Ranger | | Violation of terms & conditions in Allotment Mgmt Plan or annual mgmt plan |
| Production | | Clipping & weighing or occular based upon clipping and weighing trials as per FSH 2209.12, R-6 | Pounds per acre | Annually on problem allotments | Mod | TRI & AMP | District-Ranger | $2000 | Production changes 10% |
| Allotment Reanalysis | | Two per year following handbook standards | | Priority allotment | | | District Ranger | | Update Mgmt. Plan |
| Range Readiness | | Key areas | --- | Annual | | | District Ranger | | Determine readiness of vegetation for grazing |
| Improvement Inspection | Maintenance standards are met | | --- | Annual | | TRI & AMP | District Ranger | | Maint. std. met prior to turn-on |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED A | OBJECTIVE OF MONITORING B | METHOD OF MONITORING/ FREQUENCY C | UNIT OF MEASURE D | REPORT PERIOD E | PREC/ RELIA F | DATA STOR. G | RESPONS- IBILITY H | MONI COST I | THRESHOLD OF VARIABILITY J |
|---|---|---|---|---|---|---|---|---|---|
| **TIMBER** | | | | | | | | | |
| Dispersion of openings | Standards for size and dispersion are met | All NEPA documents will be reviewed & one project per district per year will be reviewed as per FSH 1909.15, Okanogan Supplement No. 1 | --- | 3 yrs | H/H | 2410 files | Timber & Planning Staffs | --- | Unit size or dispersion fail to meet Plan objectives |
| Harvest unit/ created opening size | Harvest unit/ created opening size limitations are appropriate | All NEPA documents will be reviewed & one project per district per year will be reviewed as per FSH 1909.15, Okanogan Supplement No. 1 | --- | 3 yrs | M/M | 2360, 2410, 2620 files | Timber, R/W/W and Rec/Plan Staffs | --- | Unit size limits do not achieve Plan objectives |
| Allowable Sale Quantity | Volume offered is consistent with Plan by working group | Attainment reports, annual tmbr cut and sell rpt, 10-year tmbr sale program, tmbr sale adjustment rpt (annual - total) | MMCF and MMBF | Annual | H/H | 2410, 2490 files & GATE data base | Timber Staff | --- | +/- 10% of Plan by working grp |
| Distribution of timber harvest acres and volume | Plan harvest activities by mgmt area, working grp and silvicultural method occur as planned | Examine each 5-yr plan and Timber Sale NEPA review & sample silvicultural activities | Acres/ MMCF by working group and mgmt area | 3 yrs | H/H | 2410, 2430 files & TRI (or replacement) | Timber Staff | --- | +/- 30% of Plan |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONS-IBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| Economics of Timber Management | Determine whether cost effective timber mgmt methods are used as planned | Review all timber projects; NEPA documents; analyze annual budget allocations; value analysis of selected timber mgmt projects (continuous - sample) | Cost per unit output | 3 yrs | H/H | 2410 files, PAMARS ADVENT Mgmt. Accounting analysis | Timber Staff and Admin. Officer | --- | None - Established |
| Economics of Timber Harvest (monitoring item may be superceded by Regional monitoring procedure) | Plan tmbr cost assumptions and stumpage value assumptions remain valid and resulting economical land base is as planned | Budget allocation, PAMARS, cut & sold rpts, review rpts, review 2400-17 (annual - sample) | Cost per MCF sold, stumpage $/MCF | 5 yrs | H/H | 2410, 2430 files, ADVENT PAMARS | Timber Staff and Admin. Officer | 0.4 ann. cost | +/- 25% net change of cost and stumpage |
| Technical suitability or unsuitability of forested lands available for timber production | Assure tmbr mgmt is practiced on suitable lands | Timber proj NEPA documents; District Silviculturists evaluate based upon site specific analysis; DRs recommend changes in land class; Forest Silviculturists/ Soil Scientist review on sample basis (continuous - sample) | Acres | 3 yrs | H/H | 1950, 2410, 2490 files, TRI (or replacement) | District Rangers, Timber & R/W/W Staffs | 4.0 ann. cost | +/- 3% net change in available suitable forest land |
| Available Suitable Lands | Assure adequate land base is available to attain Plan outputs | Legislation, regulation, Plan amendments (as needed) | Acres | As needed | H/H | 2410, 2490 files | Timber & Planning Staffs | 0.8 each change | No threshold identified |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONSIBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| Logging Systems | Most cost effective method of achieving resource objectives | Tmbr sale NEPA documents, logging feasibility rpt, tmbr sale reviews, value analysis of tmbr sales (continuous - sample) | Cost per MBF or MCF | Annual | H/M | 1950, 2410, 2430 files | Timber Staff | --- | None |
| Reforestation following regeneration harvesting | Prescribed stocking obtained following harvest within 4 years if reforestation is by artificial methods (planting, direct seeding) or 8 yrs if by natural seedlings | SILVA accomplishment rpt, annual reforestation & TSI needs rpt, annual plantation survival rpt, tmbr mgmt proj reviews (annual - sample) | Acres | 3 yrs | H/H | 2410, 2470, 2490 files, SILVA | Timber Staff | --- | Failure to achieve desired stocking on 20% of acres in planned period |
| Tree Improvement Program | Reforestation is accomplished using improved seed as planned | SILVA accomplishment rpt, tmbr mgmt proj reviews, sowing requests (annual) | Acres | 5 yrs | H/M | 2410, 2470, 2490 files, SILVA file | Timber Staff | --- | Using seed one certification class lower than called for in tree imp. plan on 10% or more acres planted after 1989 |

TABLE 5.1
MONITORING ACTIONS

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|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| Insect, disease and animal damage following mgmt activities; wildfire on available, suitable lands | Growth and volume losses caused by insects, disease or animals do not impair attainment of Plan projected outputs | Annual aerial FPM detection flights, FPM annual monitoring of pest populations, annual plantation survival rpt, silvic monitoring, proj reviews, biological surveys (annual) | Acres and severity | 3 yrs | M/M | 2410, 2470, 2490, 3400, SILVA files, annual pest detection maps | Timber Staff | --- | Pest condition increase on 10% of acres following treatment |
| Insect, disease and animal damage | Determine if due to catastrophic insect or disease, Plan output assumptions are not valid | Annual FPM aerial insect survey, FPM annual monitoring of pest populations, special purpose FPM biological surveys, yield simulators (as needed following catastrophic event) | Acres and severity | 5 yrs | M/H | 2410, 2470, 3400 files, annual pest detection maps | Timber Staff | --- | Projected growth loss of over 20% on 10% or more of available suitable lands |
| Stand destruction caused by wildfire | Growth and volume losses caused by wildfire | Annual acres burned | Acres and severity | 5 yrs | M/M | 2410, 5100 files | Timber & FM Staff | 1.0 | Over 10% of available suitable acres burned by fire intensity level 3 or greater |
| **SOIL AND WATER** | | | | | | | | | |
| Soil Productivity | Measure displacement, compaction & disturbance of 10 selected projprojects. Select projects to represent a variety of conditions | Field survey and measurements by Forest Soil Scientist with assistance from Dists. 1 visit/site to make measurements | Percentage displaced, compacted, disturbed | Once in planning period | M/M | File 2550 in SO | Watershed Staff inputs to annual & periodic GMR's and program reviews | 0.6 per site per dec. | Exceeding R-6 soil productivity stndrds for soil displacement and compaction |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED A | OBJECTIVE OF MONITORING B | METHOD OF MONITORING/ FREQUENCY C | UNIT OF MEASURE D | REPORT PERIOD E | PREC/ RELIA F | DATA STOR. G | RESPONSIBILITY H | MONI COST I | THRESHOLD OF VARIABILITY J |
|---|---|---|---|---|---|---|---|---|---|
| Water Quality and Quantity and Channel Systems | Determine if there are changes in water quality that reduces water uses downstream or causes downstream users to incur additional costs to use the water for current uses | Use periodic (every 4-5 yrs) low level (1:2000) scale photos of selected segments of 5th or 6th order streams or other important streams and their confluence w/larger streams or rivers to evaluate the occurrence of new stream degradation or agradation. Channel widening or narrowing can be measured to make inferences about stream discharge.<br>Use field observation to observe if water quality problems are occurring. Then field measurements will be taken from representative projects to determine extent of the observed problem from visual monitoring. | Turbidity units (FTU's), stream discharge, suspended sediment temperature (degrees F.) | Max. of 2 times in planning period for ea. representative (Est. 10 projs) | M/M | Rpts written & stored in 2520 file in SO | Watershed Staff inputs to annual & periodic GMR's and program reviews | $4.0 | 100% increase of estimated measured total sediment production over prediction of the Universal Soil Loss Equation model estimate.<br>Temperature increases greater than allowed in stndrds & guides<br>Photo measurements that indicate a 20% increase in measured area of stream degradation or agradation or channel widening from increases in peak flows |
| Floodplains and Wetlands | Assure these areas' values are protected | Check EA or EIS protection goals against protected areas in the field. Utilize GIS where possible & available to track areas | Acres protected | 1 proj every 2 yrs (5 during planning period) | M/M | Rpts written & stored in 2500 files in SO | Watershed Staff inputs to annual & periodic GMR's and program reviews | 2.0 | 10% deviation from projected values in EA's or EIS's |

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|---|---|---|---|---|---|---|---|---|---|
| **FACILITIES** | | | | | | | | | |
| Road miles and operational status of, as indicated in standards and guidelines | Assure that Plan is implemented as written | Numerous, including Proj Review, Accomplishment Rpts, Mgmt Reviews, Public comments, Forest Road Mgmt Plan/ Continuous<br>Use Landsat data & aerial photos (as available) w/field sampling and Forest Road Mgmt Plan/ Annually | Miles of road in a given operational status within or near mgmt area | Annual | H/H | Summ. 1920 files | Forest Staff | --- | Must be appropriate road miles and operational status |
| **HUMAN RESOURCES** | | | | | | | | | |
| Changes in community lifestyles related to Forest-dependent activities | Determine whether changes track with predictions | Review of payment to County reports, Census rpts, WA employment agency reports | --- | Annual | M/M | 1920 | Business Management Staff | .3 | Fails to meet plan objectives |
| **ECONOMICS** | | | | | | | | | |
| Comparison of actual and planned implementation costs, economic efficiency and economic effects | Determine accuracy of assumptions and data used in plan | Review of PAMARS data base, 2400-17 reports, attainment rpts, cost guides | --- | 1-3 times per year | M/M | 6520 | Business Mgmt. Staff and Planning Staff | .5 | Fails to meet plan objectives |

TABLE 5.1
MONITORING ACTIONS

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|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| **PROTECTION** | | | | | | | | | |
| Actual annual fire wildfire occurrence frequency by statistical cause by management area and district | Assure that fire management direction is being met by management area and district | Complete individual fire report, FS 5100-29, for each wildfire | Each occurrence | Annual | High/ High | FCCC Paper File | Fire Staff | | Change of +15% in total acres burned from 5 Yr. average for mgmt. area. |
| Effectiveness of Fire Management Program | Collect and evaluate sum of costs plus net resource value change for the forest. (FFP+ FFF+NVC) | Complete Fire Mgmt. Financial Review | Dollars/ Acres Protected | Annual | Mod/ Mod | FCCC Paper File | Fire Staff | 1.0M | Change of +/- 20% from Fire Mgmt. Efficiency Curve from 5 Yr. Aver. |
| Cost of large fire suppression | Determine average large fire suppression cost for Class D and larger escape fires for use in the Forest Annual C+NVC calculation. | Complete Individual Wildfire Financial Analysis | Dollars/ Acre/Fire Size Class | Annual | Mod/ Mod | PAMARS Paper Files | Fire Staff | 1.0M | Change of +20% for 3 Yr. Aver. Project Fire Cost |
| Forest fuel treatment program | Determine if total fuel treatment investment cost are meeting Forest Standards & Guidelines and established cost guidelines for meeting economic efficiency criteria | Review project EA, work plans, appraisals, and conduct general field reviews. | Dollars/ Acre Treated | Annual | Mod/ Mod | PAMARS Paper Files | Fire Staff | 1.0M | Change of +10% in fuel treatment cost by individual fuel treatment activity |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONS-IBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| **AIR QUALITY** | | | | | | | | | |
| Total Suspended Particulate emission production from the forest's prescribed burning program | Develop emission inventories for TSP for comparison with established baseline values for all prescribed burning projects predicted to consume 100 tons or greater | Smoke Management Report | Tons/Yr. | Daily with Annual Summary | Mod/ Mod | Dept. of Nat Res. Computer File<br>Paper File | Fire Staff | 1.0M | Percent change in TSP emissions produced from baseline values of 7,600 tons per year |
| **MINERALS** | | | | | | | | | |
| Operator/F.S. Compliance with Mining and Mineral Leasing Laws and Regulations | Avoid resource damage and F.S./ Operator conflicts | Review administrative process, EA and mitigation attainment/ Continuous | ----- | 3 Yrs. | M/M | 2800 files | Minerals Staff | --- | Unauthorized process or activity, unnecessary resource damage |
| FORPLAN/Mineral Operation Conflicts | Assure compatibility of FORPLAN w/mineral operation authorized by law | Monitor new mineral proposals, developments & discoveries/ Continuous | ----- | 3 Yrs. | H/H | 2800 files | Minerals Staff | --- | Conflict of authorized operation with mgmt. direction |
| Minerals Demand | Identify changes in critical minerals demand | Monitor National mineral needs/ Continuous | ----- | 3 Yrs. | M/M | 2800 files | Minerals Staff | --- | Critical demand not met |
| Adverse Effects of Forest Activities or Projects on Minerals Activities | Identify impacts to minerals | Project and EA Review/Continuous | ----- | 3 Yrs. | M/M | 2800 files | Minerals Staff | $2000 | Adverse effects |

## TABLE 5.1
## MONITORING ACTIONS

| ACTION/EFFECT MONITORED | OBJECTIVE OF MONITORING | METHOD OF MONITORING/ FREQUENCY | UNIT OF MEASURE | REPORT PERIOD | PREC/ RELIA | DATA STOR. | RESPONS- IBILITY | MONI COST | THRESHOLD OF VARIABILITY |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| Land Status | Monitor minerals availability | Adjust for changes in withdrawals, exchanges, etc./ Continuous | Acres | 3 Yrs. | H/H | 2700 & 2800 files | Lands and Minerals Staff | --- | Significant adjustments |

## AMENDMENT AND REVISION

The Forest Plan may be amended. Based on an analysis of the objectives, standards and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a change in the Plan. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedures as that required for development and approval of a Forest Plan. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

The Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly or when changes in RPA policies, goals or objectives would have a significant effect on forest level programs. In the monitoring and evaluation process, an interdisciplinary team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of the Forest Plan. The Forest Supervisor shall review the conditions on the land covered by the Plan at least every five years to determine whether conditions or demands of the public have changed significantly.

# APPENDIX A

## Recreation Projects

| Activity and Project | Fiscal Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| Cultural Resources | | | | | | | | | | |
| Evaluations (6/year) | x | x | x | x | x | x | x | x | x | x |
| Predictive Modeling Strategy | x | x | | | | | | | | |
| Trail Preconstruction Reconstruction and Construction | | | | | | | | | | |
| East Creek Lake | x | | | | | | | | | |
| Crater Creek | | | x | x | | | | | | |
| Chancellor | | x | x | | | | | | | |
| Sunrise/Merchant | | x | x | | | | | | | |
| Martin Lakes | | | x | x | | | | | | |
| Boulder Creek | | | | x | x | | | | | |
| Libby Lake | | | | x | x | | | | | |
| Mill Creek | | | | x | x | | | | | |
| Bridge Creek | | | | | x | x | | | | |
| Unknown | | | | | x | x | x | x | x | x |
| Developed Site Reconstruction and Construction | | | | | | | | | | |
| Canyon Creek Trailhead | x | | | | | | | | | |
| East Creek Trailhead | x | | | | | | | | | |
| Easy Pass Trailhead | x | | | | | | | | | |
| Clark Ridge Trailhead | | x | x | | | | | | | |
| Antoine Trailhead | | | x | x | | | | | | |
| Bonaparte Campground | | | | x | x | | | | | |
| Unknown | | x | x | x | x | x | x | x | x | x |
| Developed Site Vegetative Management Plans | | | | | | | | | | |
| Lost Lake Campground | x | | | | | | | | | |
| Klipchuck Campground | | x | | | | | | | | |
| Blackpine Campground | | x | | | | | | | | |
| Washington Pass | | | x | | | | | | | |
| Lone Fir | | | x | | | | | | | |
| Poplar Flat | | | | x | | | | | | |
| Salmon Meadows | | | | x | | | | | | |
| Falls Creek | | | | | x | | | | | |
| Buck Lake | | | | | x | | | | | |
| Oriole | | | | | | x | | | | |
| Beth Lake | | | | | | x | | | | |
| Beaver Lake | | | | | | | x | | | |
| Sweat Creek | | | | | | | x | | | |
| River Bend | | | | | | | | x | | |

| Activity and Project | Fiscal Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| Ballard | | | | | | | | x | | |
| Flat | | | | | | | | | x | |
| JR | | | | | | | | | x | |
| Loup Loup | | | | | | | | | x | |
| Cottonwood | | | | | | | | | | x |
| War Creek | | | | | | | | | | x |
| Early Winters | | | | | | | | | | x |
| Viewshed Corridor Plans | | | | | | | | | | |
| Twisp River | | x | | | | | | | | |
| 5-Lakes | | | x | | | | | | | |
| Loup Loup | | | | x | | | | | | |
| Toats Coulee | | | | x | | | | | | |
| N. Fork Salmon | | | | | x | | | | | |
| Upper Methow | | | | | x | | | | | |
| Chewuch | | | | | | x | | | | |
| 8-mile | | | | | | x | | | | |
| N. Fork Gold | | | | | | | x | | | |
| Middle Salmon/Boulder | | | | | | | | x | | |
| McClure Mountain | | | | | | | | | x | |
| Buttermilk/Blackpine | | | | | | | | | | x |

best copy
available

# APPENDIX B

## Wilderness Projects

| Activity and Project | Fiscal Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| Implementation Schedules * | | x | x | | | | | | | |
| Cultural Resources Evaluations (4/year) | x | x | x | x | x | x | x | x | x | x |
| Trail Preconstruction Reconstruction and Construction | | | | | | | | | | |
| E. Fork Buttermilk | | x | | | | | | | | |
| Oval Lake | x | | | | | | | | | |
| Buckskin | x | | | | | | | | | |
| Windy Peak | | x | | | | | | | | |
| Tatoosh Butte | x | | | | | | | | | |
| Castle/Frosty | | x | | | | | | | | |
| Twisp Pass | | x | x | | | | | | | |
| Clutch Creek | | x | x | | | | | | | |
| Devils Ridge | | | x | x | | | | | | |
| Peepsight | | | x | x | | | | | | |
| Frosty Creek Bridge | | | x | x | | | | | | |
| W. Fork Buttermilk | | | | x | x | | | | | |
| PCT/Rock Pass | | | | | x | x | | | | |
| Basin Creek | | | | | x | x | | | | |
| Cedar Creek | | | | | x | x | | | | |
| Jackita Ridge | | | | | x | x | | | | |
| Eagle Creek | | | | | | x | x | | | |
| Slate Pass | | | | | | x | x | | | |
| Tony Basin | | | | | | | x | x | | |
| Duffy Lake | | | | | | | x | x | | |

* As Implementation Schedules are completed, additional specific projects will be added to this list.

## APPENDIX C

### WILDLIFE PROJECT SCHEDULE
(including necessary surveys and plans)

| Year | Project | Units (Acres, Structures, Plans, Surveys) | Cost |
|---|---|---|---|
| 1987 | Raptor Perch Structures | 50 structures | $ 5000 |
| 1987 | Aspen Regeneration | 15 acres | $ 3500 |
| 1988 | | 15 acres | $ 3600 |
| 1989 | | 15 acres | $ 3700 |
| 1990 | | 15 acres | $ 3800 |
| 1991 | | 15 acres | $ 3900 |
| 1987 | Serviceberry Pruning | 50 acres | $ 1720 |
| 1988 | | 50 acres | $ 1720 |
| 1987 | Pothole Development | 10 structures | $ 3000 |
| 1988 | | 10 structures | $ 3000 |
| 1987 | Fishery Plunge Pools | 1 survey & plan | $ 750 |
| 1988 | | 10 structures | $ 4250 |
| 1987 | Minnie Fire Rehab | Collect seed for nursery | $ 4000 |
| 1988 | | 800 acres | $16000 |
| 1987 | Maintain Existing Structures | 21 structures | $ 4200 |
| 1988 | | 16 structures | $ 6250 |
| 1989 | | 16 structures | $ 6300 |
| 1990 | | 16 structures | $ 6450 |
| 1991 | | 16 structures | $ 6600 |
| 1987 | Winter Range Rehab & Improvement | 2 plans | $ 825 |
| | | 575 acres | $ 4950 |
| 1988 | | 125 acres | $14000 |
| 1989 | | 1 plan | $ 300 |
| | | 1100 acres | $15200 |
| 1990 | | 50 acres | $ 8000 |
| 1987 | Water Developments | 2 structures | $ 2000 |
| 1988 | | 2 structures | $ 2100 |
| 1989 | | 2 structures | $ 3310 |

# APPENDIX D

## RANGE MANAGEMENT PROJECT SCHEDULE

## 1986-1988

| Year | Number | Project Name | Units | Cost |
|---|---|---|---|---|
| 1986 | 035100 | RBF Seeding | 68 acres | 1,000 |
| | 035000 | Noxious Weed Control | | 3,849 |
| | 035110 | Noxious Weed Control | | 5,033 |
| | 035200 | Aeneas Allotment Fence | 1-1/2 miles | 7,600 |
| | 035240 | Bannon Allotment | | |
| | | Non-Structural | 300 acres | 1,200 |
| | | Structural | 1 each | 1,500 |
| | 035320 | Water Developments (Cumberland) | 3 each | 1,600 |
| | 035380 | Burn, 2 WD, 1 mi Fence (Frosty) | | 3,600 |
| | 035420 | Cattleguard (Bailey) | 1 each | 5,500 |
| | 035440 | Burn (Horse Pasture) | 150 acres | 1,263 |
| | 035610 | Water Developments (Wauconda) | 2 each | 2,400 |
| | 039530 | Noxious Weed Control | 75 acres | 11,763 |
| | 044400 | Knapweed Survey | | 1,000 |
| | 044410 | Tansy Control (Beaver Creek) | | 700 |
| | 044420 | Tansy Control (Buttermilk) | | 450 |
| | 045201 | Water Developments (Libby) | 3 each | 4,800 |
| | 045230 | Burn and Seed | 80 acres | 2,740 |
| | 045232 | Cover Manipulation | 92 acres | 1,436 |
| | 045280 | Water Development (Benson) | 1 each | 600 |
| | 045420 | Chiliwist Seeding | 200 acres | 4,210 |
| | | Chiliwist Water Development | 1 each | 700 |
| | 045441 | Sec. 25 Water Development | 1 each | 1,270 |
| | 045442 | Water Developments | 2 each | 2,600 |
| | | Seeding | 100 acres | 2,965 |
| | 054400 | Noxious Weed Survey & Control | | 2,280 |
| | 055320 | Fence (Goat Creek) | 1 mile | 2,000 |
| | 055370 | Water Development (E. Chewuck) | 2 each | 2,982 |
| | 055470 | Driftway (Spokane Gulch) | 1 mile | 500 |
| | 055520 | Water Development (Fawn) | 1 each | 1,000 |
| | 055600 | Seeding (Afterburn) | 40 acres | 880 |
| | 055660 | Water Development (Cub Creek) | 2 each | 2,300 |
| | 055700 | Water Development (Cub Creek) | 2 each | 3,000 |
| | 055710 | Fence (Cub Creek) | 2 miles | 4,500 |
| | 055720 | Seeding (Cub Creek) | 20 acres | 500 |
| | 058390 | Prescribed Burn (Farewell) | 4 acres | 1,581 |
| | 239300 | Interagency Noxious Weed Co-op (County) | | 2,000 |
| 1987 | 035100 | RBF Seeding | 750 acres | 12,038 |
| | 045201 | Spring Development | 3 each | 5,000 |
| | | Cattle Guard | 1 each | 4,000 |
| | | Range Fence | 2 miles | 3,000 |
| | 045230 | Seeding (RA) | 10 acres | 350 |
| | 045234 | Seeding (RA) | 10 acres | 350 |

|  |  |  |  |  |
|---|---|---|---|---|
| 1987 cont | 045235 | Cover Manipulation | 65 acres | 520 |
|  |  | Seeding (RA) | 26 acres | 910 |
|  | 045236 | Cover Manipulation | 80 acres | 640 |
|  |  | Seeding (RA) | 20 acres | 700 |
|  | 045237 | Cover Manipulation | 100 acres | 800 |
|  |  | Seeding (RA) | 80 acres | 2,800 |
|  | 045238 | Cover Manipulation | 142 acres | 1,136 |
|  | 045241 | Seeding (RA) | 20 acres | 300 |
|  | 045243 | Seeding (RA) | 50 acres | 1,750 |
|  | 045280 | Spring Development (Benson) | 2 each | 4,000 |
|  |  | Range Fence (Benson Allotment) | 1 mile | 2,500 |
|  | 055350 | Remmel Log Fence | 1 mile | 500 |
|  |  | Spring Development | 1 each | 1,000 |
|  | 055410 | Fawn Creek-Boesel Bndry Fence | 3 miles | 2,882 |
|  | 055450 | Ramsey Controlled Burn | 50 acres | 800 |
|  | 055490 | Ramsey Water Developments | 3 each | 2,982 |
|  | 055540 | Blackpine Seeding | 50 acres | 1,100 |
|  | 055560 | Lamb Butte Seeding | 50 acres | 1,100 |
| 1988 | 035230 | Range Structure | 1 each | 900 |
|  | 035240 | Range Structure | 2 each | 1,800 |
|  | 035260 | Range Structure | 2 each | 1,800 |
|  | 035290 | Range Structure | 3 each | 2,700 |
|  | 035320 | Range Structure | 2 each | 1,800 |
|  | 035360 | Range Structure | 1 each | 900 |
|  | 035380 | Range Structure | 1 each | 900 |
|  | 035400 | Range Fence | 6 miles | 12,000 |
|  | 035480 | Range Structure | 1 each | 900 |
|  | 035490 | Range Structure | 2 each | 1,800 |
|  | 035530 | Range Structure | 2 each | 1,800 |
|  | 035550 | Range Structure | 1 each | 900 |
|  | 035570 | Range Structure | 1 each | 900 |
|  | 035600 | Range Structure | 1 each | 900 |
|  | 035610 | Range Structure | 3 each | 2,700 |
|  | 045190 | Spring Development | 3 each | 5,200 |
|  | 045236 | Seeding (RA) | 10 acres | 350 |
|  | 045238 | French Russian Burn and Seed | 135 acres | 4,725 |
|  | 045239 | Puddle Burn and Seed | 45 acres | 360 |
|  | 045242 | Bohart Spring Burn and Seed | 100 acres | 3,500 |
|  | 045250 | Range Fence | 8 miles | 9,000 |
|  | 055390 | Lower Ramsey Prescribed Burn | 150 acres | 1,200 |
|  | 055482 | Virginian Rdg Sprng Development | 2 each | 3,000 |
|  | 055530 | Pearrygin Seeding | 30 acres | 660 |
|  | 055550 | Ramsey Seeding | 50 acres | 1,100 |
|  | 055570 | Wolf Controlled Burn | 50 acres | 800 |
|  | 055580 | Wolf Log Fence | 1 mile | 1,000 |
|  | 055610 | Goat Water Development | 1 each | 1,491 |
|  | 055620 | Goat Fence Rehab (Spokane Gulch) | 6 miles | 6,000 |
|  | 055630 | Wolf Creek Allotment Seed and Fertilize | 50 acres | 3,060 |

Grazing Allotment Re-Analysis and Management Plan Update Priorities by Ranger District

| Priority | Tonasket | Twisp | Winthrop |
|---|---|---|---|
| 1 | Tunk | Benson | Tiffany |
| 2 | Aeneas | Libby | Wolf |
| 3 | Horseshoe Basin | Beaver | E. Chewack |
| 4 | Cedar | Poorman | Cub |
| 5 | B.S. | Frazer | Goat |
| 6 | Wauconda | Finley | Ramsey |
| 7 | Toats Coulee | Texas | Fawn |
| 8 | Dugout | Newby | Remmel |
| 9 | Big Canyon | Hungary Mtn. | Harts Pass |
| 10 | Haley | Little Bridge | Boulder |

At an average of two allotment analyses per year, the above program would require approximately fifteen years. Updating or re-writing of management plans will follow the completion of analysis data prior to the following year's grazing season.

# APPENDIX E

## Detailed Schedule of Timber Sales - FY 1987 to FY 1989

Several timber sales scheduled for sale during 1987 and 1988 contain timber volume returned to the Government under provisions of the Timber Contract Modification Act of 1984. Those sales that contain substantial volumes of returned volume contain the word "Buyout" in their name. For example, "Ortell Buyout." Timber sales including additional (not returned) volume are footnoted to indicate the approximate amount of buyout volume they contain.

This detailed timber sale schedule is based upon information and conditions current at the time of Forest Plan development. If these conditions change, and as new information becomes available during implementation of the Forest Plan, the timber sales program schedule may be modified.

Fiscal Year 1987

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles C | R | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| Winthrop | Ortell Buyout | 1<br>5 | 1985005 | T37N, R21E, Sec 31,32<br>T36N, R21E, Sec 5,6,8,9, 15,16,21,22,23 | .290<br>.290 | 1.75<br>1.75 | 0 | 0 | Shelterwood, overstory removal, partial cuts in mixed conifer |
| Winthrop | Chris | 5 | 1984008 | T38N R22E, Sec 1,10,11, 12,13,14,15,16,20,21 | .143 | 1.00 | 0 | 0 | Clearcuts, shelterwoods and seed tree cuts in mixed conifer and lodgepole pine |
| Winthrop | Stag | 1 | 1984014 | T37N, R21E, Sec 5,6,8,15, 16,17,20,21,22,28 | .420 | 3.00 | 4.4 | 0 | Clearcuts, seed tree and shelterwood cuts in mixed conifer and lodgepole pine. Spring closure on F.S. Road #5140. |
| Winthrop | Wool | 1<br>5<br>14 | 1984020 | T37N, R21E, Sec 20,21,26, 27,28,29,30,31,33,34,35<br>T37N, R20E, Sec 24<br>T36N, R21E, Sec 1,2,3,4, 9,10,14,15,22,25 | .410<br>1.080<br>.160 | 2.50<br>6.5<br>1.00 | 5.9 | .1 | Clearcuts, shelterwood cuts and overstory removal cuts in mixed conifer. Spring closure on F.S. Road #5140, fawning area closure. |
| Twisp | Blue Buyout | 1<br>14 | 1985019 | T34N, R22E, Sec 1<br>T34N, R23E, Sec 6<br>T35N, R22E, Sec 24,25,36<br>T35N, R23E, Sec 17,18,19, 20,29,30,31 | .369<br>.861 | 3.69<br>8.61 | 0 | 0 | Clearcut, shelterwood, seed tree and overstory removal in mixed conifer |
| Twisp | Lake 1/ | 1<br>5<br>14 | 1984013 | T32N, R20E, Sec 1,2,3<br>T32N, R21E, Sec 6<br>T33N, R20E, Sec 22,23,24, 25,26,27,34,35,36 | 1.300<br>.371<br>.186 | 9.10<br>2.60<br>1.30 | 0 | 0 | Clearcut, shelterwood, seed tree and overstory removal in mixed conifer |

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1/ Includes 6.1 MMBF from Butte I Buyout

Fiscal Year 1987

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles | | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | C | R | |
| Tonasket | Dugout II | 1<br>9<br>14 | 19840313 | T35N, R31E, Sec 19,20,21, 28,29,30,31,32,33 | .625<br>.125<br>.500 | 6.25<br>1.25<br>5.00 | 1 | 0 | Clearcut, seed tree and overstory removal in mixed conifer |
| Tonasket | Turner Lake | 1<br>9<br>14 | 19840363 | T37N, R30E, Sec 15,22,23, 26,27 | .550<br>.438<br>.109 | 2.30<br>2.07<br>.23 | 0 | 8.7 | Overstory removal of shelterwood and seed tree harvests in mixed conifer |
| Tonasket | Radar Buyout | 1<br>5 | 19850103 | T35N, R23E, Sec 1,2,11, 12,13,14<br>T35N, R24E, Sec 5,6,7,8,9 | .570<br>.380 | 5.70<br>3.80 | 0 | 0 | Shelterwood, seed tree and partial cutting in mixed conifer |
| Tonasket | Rainy Point | 1<br>5 | 19840353 | T36N, R24E, Sec 19,20,21, 28,29,30,32,33 | .536<br>.358 | 2.76<br>1.84 | 0 | 7.7 | Seed tree, clearcut, overstory removal, sanitation in mixed conifer |
| Tonasket | Mine Buyout | 1<br>14 | 19850113 | T40N, R30E, Sec 11,12<br>T40N, R31E, Sec 7 | .240<br>.360 | 2.30<br>3.50 | 0 | 0 | Overstory removal and partial cutting in mixed conifer |

Fiscal Year 1988

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles | | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | C | R | |
| Winthrop | TRI 1/ | 1 | 19840075 | T36N, R22E, Sec 33,34<br>T35N, R22E, Sec 3,4,5 | .940 | 9.4 | 3.7 | .6 | Clearcut, shelterwood and overstory removal cuts in mixed conifer and lodgepole pine |
| Winthrop | J&J 2/ | 1<br>12 | 19840105 | T36N, R22E, Sec 2,3,4,8, 9,10,11,14,15,16<br>T37N, R22E, Sec 33,34 | .283<br>.850 | 2.55<br>7.65 | 2.0 | .3 | Clearcut, shelterwood and seed tree cuts and selection cuts in mixed conifer and lodgepole pine |
| Winthrop | Brown | 12 | 19840165 | T37N, R22E, Sec 25,26<br>T37N, R23E, Sec 19,20,29, 30,31,32 | .659 | 6.7 | 11.9 | 0 | Clearcut in lodgepole pine and mixed conifer |

1/ Includes 5.9 MMBF buyout from Stone Sale.

2/ Includes 3.9 MMBF buyout from J.E.M. Sale.

Fiscal Year 1988

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles | | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | C | R | |
| Twisp | Boot Buyout | 1<br>5 | 19850244 | T34N, R23E, Sec 25,26 | .096<br>.224 | .96<br>2.24 | 0 | 0 | Partial cuts and overstory removal in mixed conifer |
| Twisp | Polepick | 1<br>5<br>14 | 19840144 | T32N, R23E, Sec 1,3,12<br>T32N, R23E, Sec 2,3,9,11, 12,14,15,21,22,23,24,26, 27,28,33,34,35 | 1.158<br>.347<br>.810 | 3.50<br>1.05<br>2.45 | 3.3 | 1.1 | Clearcut, seed tree, shelterwood, overstory removal and selection cuts in mixed conifer |
| Twisp | Light | 1<br>14 | 19840124 | T34N, R23E, Sec 3,8,9,10,17<br>T35N, R23E, Sec 27,28,33,34 | .437<br>.049 | 4.50<br>.50 | 0 | 2.7 | Clearcut, shelterwood cuts in mixed conifer |
| Tonasket | Hoot Buyout | 1<br>14 | 19850123 | T38N, R29E, Sec 20,29,30,32 | .648<br>.072 | 3.24<br>.36 | 0 | 0 | Overstory removal and partial cuts in mixed conifer |
| Tonasket | Mine II Buyout | 14 | 19850143 | T40N, R30E, Sec 1,12<br>T40N, R31E, Sec 6,7 | .500 | 3.70 | 0 | 0 | Overstory removal and partial cuts in mixed conifer |
| Tonasket | Napol Buyout | 1<br>14 | 19850133 | T38N, R29E, Sec 3,9,10 | .629<br>.157 | 4.40<br>1.10 | 0 | 0 | Overstory removal and partial cuts in mixed conifer |
| Tonasket | Annie | 1<br>9<br>14 | 19840333 | T37N, R30E, Sec 20,29,30, 32 | .180<br>.270<br>.450 | 1.14<br>1.71<br>2.85 | 3.7 | 1.3 | Clearcut, shelterwood, overstory removal and sanitation cuts in mixed conifer |
| Tonasket | Toats | 5<br>12 | 19840223 | T39N, R24E, Sec 17,18,20, 21,29,30 | .720<br>.480 | 3.30<br>2.20 | 7.1 | 1.5 | Clearcut, shelterwood, overstory removal and commercial thinning cuts in mixed conifer and lodgepole pine |
| Tonasket | Cope | 1<br>9 | 19840283 | T36N, R29E, Sec 16,17,20, 21,29 | 1.355<br>.151 | 6.03<br>.67 | 0 | 0 | Overstory removal, clearcut, shelterwood and seed tree cutting in mixed conifer |
| Tonasket | Corral | 12 | 19840293 | T39N, R23E, Sec 28,32,33, 34<br>T38N, R22E, Sec 3,4,5,9,14 | 1.167 | 7.0 | 1.8 | - | Clearcut, seed tree, shelterwood in lodgepole pine |

Fiscal Year 1989

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles | | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | C | R | |
| Winthrop | McLeod | 1 | 19840255 | T37N, R20E, Sec 19,20,28, 29,30,31,32 | .30 | 5.3 | 6.3 | 0 | Clearcut, shelterwood and overstory removal in mixed conifer |

Fiscal Year 1989

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles C | Road Miles R | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| Winthrop | Hardt | 5<br>12 | 19840065 | T36N, R22E, Sec 12,13<br>T36N, R23E, Sec 8,18,19 | .13<br>.30 | 1.5<br>3.4 | 5.7 | 0 | Clearcut, shelterwood and overstory removal in mixed conifer and lodgepole pine |
| Winthrop | Barney | 1 | 19840275 | T38N, R21E, Sec 32<br>T37N, R21E, Sec 5,7,8,9, 15,16,22 | .54 | 6.7 | 7.1 | 0 | Clearcut, shelterwood, overstory removal in mixed conifer and lodgepole pine |
| Winthrop | Ike | 5 | 19840225 | T37N, R21E, Sec 1<br>T37N, R22E, Sec 23<br>T38N, R21E, Sec 35,36 | .20 | 3.0 | 0 | 0 | Clearcut and shelterwood in mixed conifer and lodgepole pine |
| Twisp | Bobcat | 1 | 19850164 | T35N, R24E, Sec 31<br>T35N, R23E, Sec 36<br>T34N, R23E, Sec 1<br>T34N, R24E, Sec 6 | .56 | 5.0 | 5.0 | 0 | Clearcut, shelterwood and seed tree in lodgepole and mixed conifer |
| Twisp | Split | 9<br>14 | 19840174 | T34N, R22E, Sec 1,11,14<br>T34N, R23E, Sec 6,7,18<br>T35N, R22E, Sec 24,25 | .17<br>.41 | 1.62<br>3.78 | 7.4 | 0 | Clearcut, shelterwood and overstory removal in mixed conifer and lodgepole pine |
| Twisp | Little Lake | 1<br>5 | 19840154 | T34N, R23E, Sec 25,36<br>T34N, R22E, Sec 19,20,30 | .98<br>.11 | 10.8<br>1.2 | 16.2 | .1 | Clearcut, seed tree, shelterwood and overstory removal in lodgepole and mixed conifer |
| Tonasket | Spur | 1<br>5 | 19840303 | T39N, R30E, Sec 29,32<br>T38N, R30E, Sec 5,8,17, 18,19 | .36<br>.54 | 1.6<br>2.40 | 7.8 | 0 | Clearcut, overstory removal and partial cutting in mixed conifer |
| Tonasket | Day | 1<br>14 | 19840183 | T36N, R31E, Sec 22,27 | .19<br>.12 | 2.04<br>1.36 | 1.0 | - | in mixed conifer |
| Tonasket | Dill | 1<br>14 | 19840153 | T39N, R31E, Sec 28,29,31, 32<br>T38N, R31E, Sec 6 | .29<br>.43 | 2.16<br>3.24 | 0 | 5.9 | Seed tree and overstory removal cuts in mixed conifer |
| Tonasket | Otter-Haley | 1<br>9 | 19840263 | T39N, R28E, Sec 2,11,13, 14,23 | .720<br>.08 | 3.60<br>.40 | 0 | 0 | Clearcut, shelterwood, overstory removal and commercial thin in mixed conifer |
| Tonasket | Fish | 1<br>14 | 19840163 | T35N, R29E, Sec 15,16,17, 20,21,22,27,28,29,32,33, 34 | .88<br>.10 | 5.40<br>.60 | 0 | 0 | Clearcut, seed tree, shelterwood and overstory removal in mixed conifer and lodgepole pine |

Fiscal Year 1989

| Ranger District | Sale Name | MA | Sale No. | Location - all or part of: | Area (acres) | Volume (MMBF) | Road Miles C | Road Miles R | Probable Harvest Method by Forest Type |
|---|---|---|---|---|---|---|---|---|---|
| Tonasket | Cazadero | 1 | 19840173 | | .79 | 5.64 | - | - | Overstory removal, shelterwood, clearcut and seed tree harvests in mixed conifer and lodgepole pine |
| | | 5 | | | .52 | 3.76 | | | |
| Tonasket | Cheek | 1 | 19840233 | T38N, R29E, Sec 34,35,36 | .60 | 2.5 | - | - | Overstory removal, seed tree and clearcut |
| | | 14 | | T38N, R29E, Sec 1,2,3 | .64 | 2.8 | | | |

## APPENDIX F

## WATERSHED RESTORATION SCHEDULE

| Project Name | Type of Work | Priority | Acres | Cost $ |
|---|---|---|---|---|
| Ben Creek | Check Dams. Channel Clearing. Diversion | 1 | 5 | $1000 |
| Mission Creek | Check Dam Installation | 2 | 3 | $1500 |
| N. F. Boulder Creek | Road Drainage Correction. Channel Clearing | 3 | 10 | $1500 |
| Reed Ranch | Gully Stabilization | 4 | 10 | $1500 |
| Beaver Lake Road | Road Drainage Improvment. Removal of Old, Poorly Functioning Culverts | 5 | 20 | $4000 |
| Rader Creek | Maintenance of Water bars in Old Skid Trails | 6 | 10 | $1700 |
| Azurite Mine Tailings | * Removal of Mine Tailings From Alongside Mill Cr., Erosion Control of Mine Tailings. | 7 | 50 | $50000 |

* There may be some problems dealing with current claiments. They may view the tailings as an ore reserve.

# APPENDIX G

Major Activities Planned for Roads (does not include local road construction for timber sales)

| Year | Activity | Approx. Length | Estimated Cost | Ranger District |
|---|---|---|---|---|
| 1986 | Arterial Reconstruction, Meadows Sec. II, Rd. No. 39 | 7.5 | 240,000 | Tonasket |
| 1988 | Collector Reconstruction, Nicholson Creek, Rd. No. 3575 | 2.5 | 45,000 | Tonasket |
| 1989 | Arterial Reconstruction, Middle Salmon-Boulder, Rd. No. 37 | 12.4 | 372,000 | Winthrop |
| 1990 | Arterial Reconstruction, Meadows Sec. III, Rd. No. 39 | 4.5 | 108,000 | Tonasket |
| 1990-2000 | Arterial Reconstruction, Meadows Sec. IV, Rd. No. 39 | 6.4 | 115,000 | Tonasket |
| 1990-2000 | Collector Reconstruction, Gold Creek, Rd. No. 4340 | 0.25 | 80,000 | Twisp |
| 1990-2000 | Arterial Reconstruction (spot), Cus-Goat, Rd. No. 52 | 0.5 | 20,000 | Winthrop |
| 1990-2000 | Arterial Reconstruction (spot), Buttermilk-Libby, Rd. No. 43 | 8 | 80,000 | Twisp |
| 1990-2000 | Arterial Reconstruction, Meadows-Toats, Rd. No. 39 | 5 | 150,000 | Tonasket |
| 1990-2000 | Arterial Reconstruction, South Fork Salmon, Rd. No. 42 | 5.7 | 320,000 | Tonasket and Twisp |
| 1990-2000 | Arterial Reconstruction, North Fork Salmon, Rd. No. 38 | 6.8 | 204,000 | Tonasket |
| 1990-2000 | Collector Reconstruction, West Side Chewuch, Rd. No. 5160 | 5.5 | 165,000 | Winthrop |
| 1990-2000 | Arterial Reconstruction, Bonaparte, Rd. No. 32 | 2.7 | 81,000 | Tonasket |

*U.S. GOVERNMENT PRINTING OFFICE: 1986-0-693-057/28,004